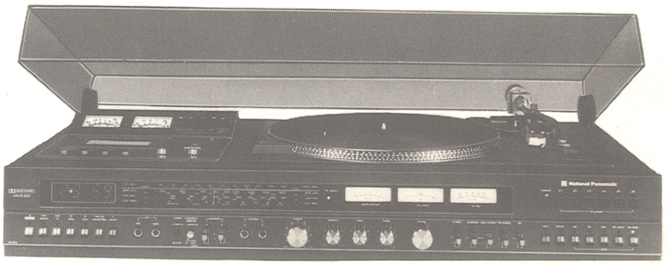
ORDER NO. TSD-7809-327

Service Manual

Compact Stereo
SG-6070/(GE)

FM/AM/FM STEREO RADIO WITH CASSETTE TAPE DECK AND RECORD PLAYER

DOLBY SYSTEM



* "Dolby" and the double D symbol are trade marks of Dolby Laboratories.
* Noise reduction system manufactured under license from Dolby Laboratories.

Specifications

AMPLIFIER SECTION

Power Output	MPO 60 × 2W (THD 1%, 4Ω) RMS 45 × 2W (THD 1%, 4Ω) One Channel Driven RMS 40 × 2W (THD 1%, 4Ω) Both Channel Driven
Frequency Response	10 Hz ~ 25 kHz, ±1.5 dB (DIN)
Power Band Width	10 Hz ~ 50 kHz, −3 dB (DIN)
Input Sensitivity and Impedance:	
Phono	3 mV, 47kΩ
Aux	250 mV, 100kΩ
Mic	1 mV, 3kΩ
Ext. Tape	250 mV, 100kΩ
Rec Out and Impedance	DIN: 40 mV, 82kΩ
Tone Controls:	
Bass	±10 dB at 50 Hz
Treble	±10 dB at 10 kHz
High Filter	−6 dB/oct. from 7 kHz
Loudness Control	+12 dB at 50 Hz (Volume at −30 dB position) +4 dB at 10 kHz (Volume at −30 dB position)

FM TUNER SECTION

Tuning System	Varactor Diode with "Sensor Touch" 6 pre-selectors and 1 manual tuning
Frequency Range	87.5 ~ 108 MHz
Intermediate Frequency (IF)	10.7 MHz
Sensitivity	2.0 μV (S/N 26 dB Mod. 40 kHz (DIN) 2.0 μV (IHF)
Image Ratio	45 dB (98 MHz)
Signal/Noise Ratio	65 dB (at 1 kHz, 60 dB, 40 kHz)
Distortion	Mono: 0.15% (at 1 kHz, 60 dB, 40 kHz) Stereo: 0.3% (at 1 kHz, 60 dB, 40 kHz)
Stereo Separation	45 dB: (at 1 kHz, 60 dB, 30%) 40 dB: (at 250 Hz~6.3 kHz, 60 dB, 40 kHz) (DIN) 30 dB: (at 6.3 ~ 10 kHz, 60 dB, 40 kHz) (DIN)
Selectivity	60 dB (at 1 kHz, 60 dB, 40 kHz)

AM TUNER SECTION

Frequency Range	MW: 525~1605 kHz (572~187m) LW: 145~350 kHz (2070~857m) SW: 5.9~18 MHz (50.8~16.7m)
Intermediate Frequency (IF)	455 kHz
Sensitivity	MW: 100 μV/m for 50 mV (1 MHz) LW: 250 μV/m for 50 mW (240 kHz) SW: 8 μV for 50 mW (12 MHz)
Image Ratio	MW: 45 dB (1 MHz) LW: 50 dB (240 kHz) SW: 15 dB (12 MHz)

RECORD PLAYER SECTION

Player System	Direce-Drive, Automatic Return, Cue/Stop Sensor-Touch Operations
Turntable	31.6 cm (12-7/16") Aluminum Die Cast
Turntable Speeds	33-1/3 and 45 rpm, 2-speed with pitch controls and stroboscope
Wow and Flutter	0.06% (WRMS), ±0.1% (DIN WTD)
Speed Adjustment	±4%
Phonomotor	Ultra low-speed brushless DC Motor
Cartridge	Moving Magnet Type (EPC270CX)
Stylus	Diamond (EPS270ED)
Stylus Pressure	1.5 ~ 2.0g
Frequency Response	20 Hz ~ 20 kHz (DIN)
Separation	23 dB (DIN)
Signal/Noise Ratio	65 dB (DIN B)

TAPE DECK SECTION

Deck System	Full Automatic Stop, Sensor Touch Operations
Track System	4-Track, 2-Channel
Recording System	AC Bias (50 kHz) with Dolby NR System
Erasing System	AC Erase (50 kHz)
Tape Speed	4.75 cm/sec. (1-7/8 i.p.s.)
Frequency Response	20 Hz ~ 15 kHz (Normal) 20 Hz ~ 16 kHz (Fe-Cr) 20 Hz ~ 16 kHz (CrO₂)
Signal/Noise Ratio:	
Dolby NR − Out	DIN: 55 dB (Normal) 57 dB (Fe-Cr) 57 dB (CrO₂)
Dolby NR − In	10 dB or more improved at more than 5 kHz (DIN): 61 dB (Normal) 63 dB (Fe-Cr) 63 dB (CrO₂)
Erase Ratio	70 dB (DIN)
Channel Separation	40 dB (DIN)
Crosstalk	66 dB (DIN)
Wow and Flutter	0.08% (WRMS), ±0.16% (DIN)

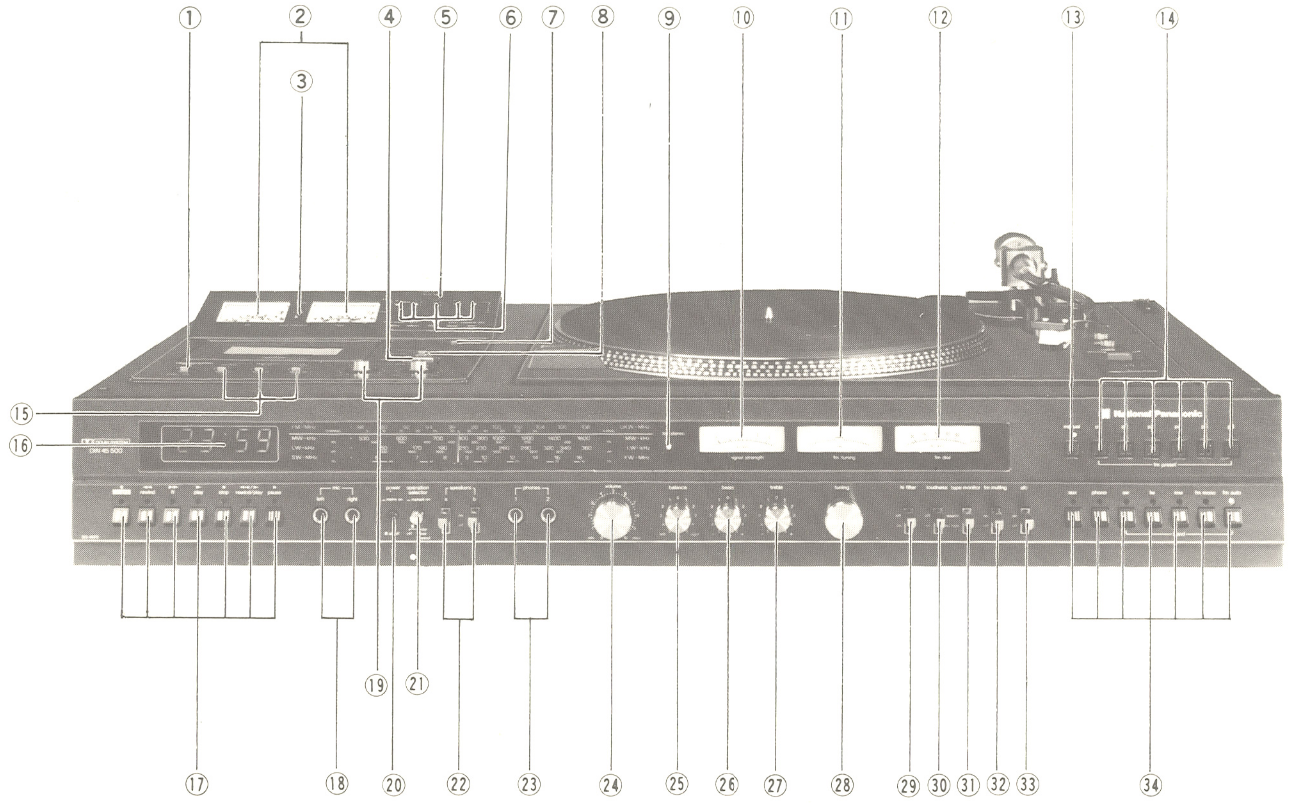
POWER CONSUMPTION	310W
POWER SUPPLY	AC 110V, 120V, 220V, 240V, 50/60 Hz
DIMENSIONS (W × H × D)	740 mm × 430 mm × 190 mm
WEIGHT	23 kg

* Specifications are subject to change without notice for further improvement.

National Panasonic

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

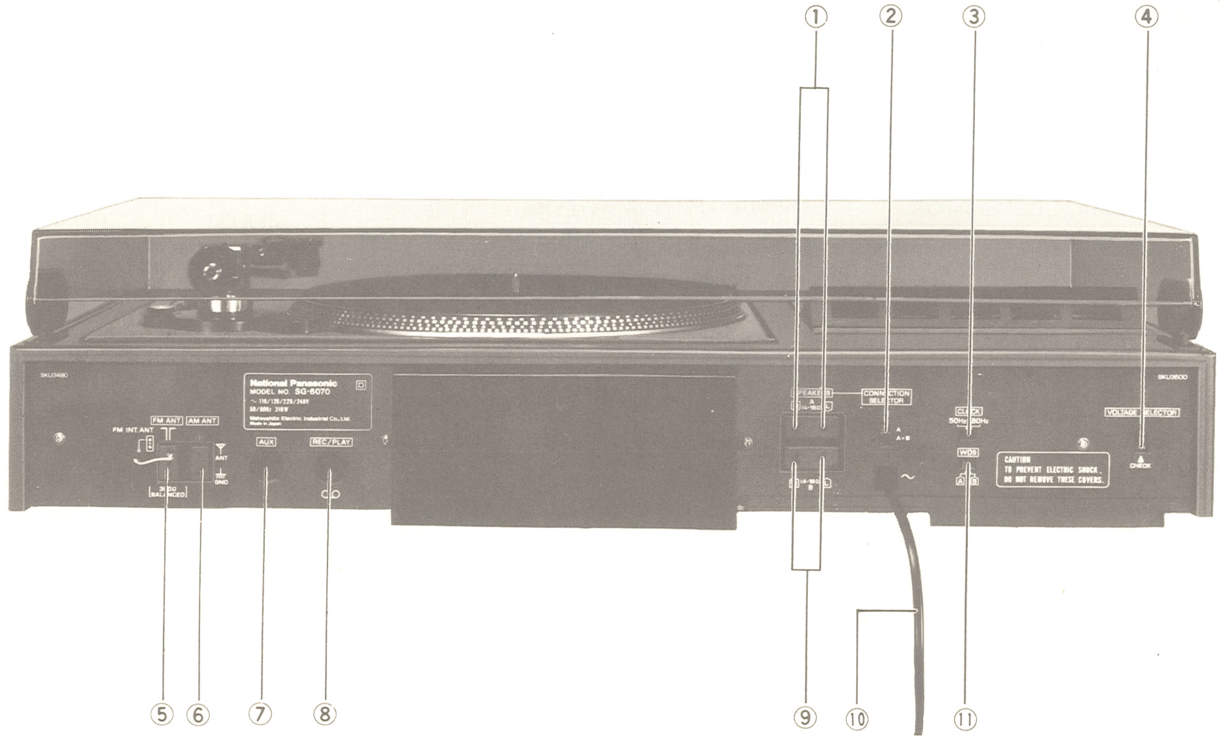
LOCATION OF CONTROLS—1



① Dolby Nr. Push-Button Switch (▂ in ▆ out)
② VU Meter (left, right)
③ Peak Indicator (+7 dB, +3 dB)
④ Eject Button
⑤ Clock Light Selector Switch (Bright ↔ Dim)
⑥ Clock Switches
  - Display Switch (clock and timer adjust)
  - Adjust Switch (fast, slow)
  - Timer Switch (on—off)
  - Sleep Switch (set—clear)
  - Timer Function Switch (fm—rec, fm—on, cassette play)

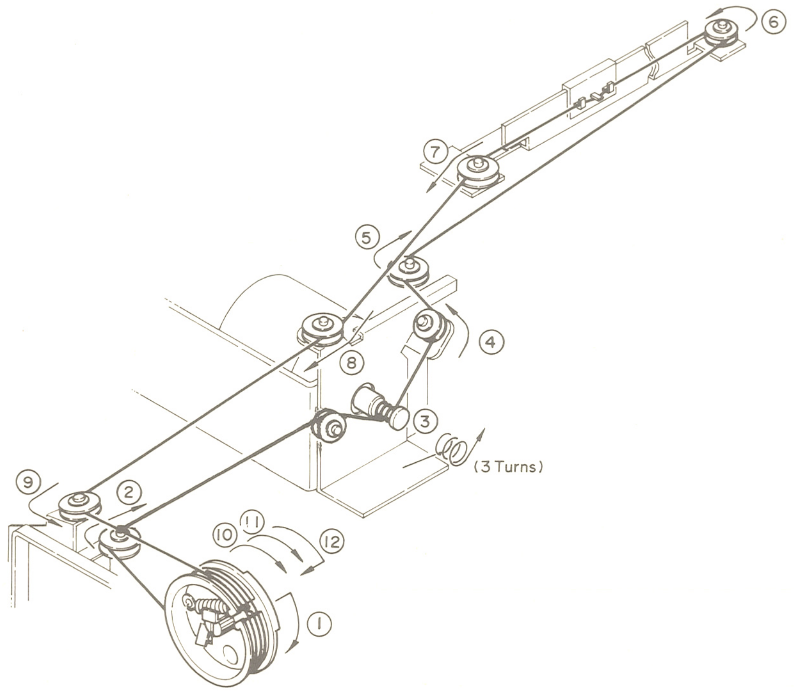
⑦ Tape Counter and Reset Button
⑧ Memory Button (▂ on ▆ off)
⑨ FM Stereo indicator
⑩ AM, FM Signal Strength Meter
⑪ FM Tuning Meter
⑫ FM Dial Meter
⑬ FM Manual Sensor-Touch Button and Indicator
⑭ FM Preset Sensor-Touch Buttons and Indicators ($P_1 \sim P_6$)
⑮ Tape Selector (normal, fe-Cr, CrO_2)
⑯ Clock Display
⑰ Tape Deck Sensor-Touch Buttons (record, rewind, ff, play, stop, rewind/play, pause)
⑱ Microphones Jacks (right, left)
⑲ Rec Level Control (right, left)
⑳ Power Switch (▂ mains on ▆ all off)
㉑ Operation Selector Push-Button Switch (▂ manual on ▆ manual off, under timer control)
㉒ Speakers Switch (a—on, off, b—on, off)
㉓ Headphones Jacks (1, 2)
㉔ Volume Control
㉕ Balance Control
㉖ Bass Control
㉗ Treble Control
㉘ Tuning Control
㉙ Hi-Filter Switch (off—on)
㉚ Loudness Switch (off—on)
㉛ Tape Monitor Switch (source—ext tape)
㉜ FM Muting Switch (on—off)
㉝ AFC Switch (on—off)
㉞ Function Selector Sensor-Touch Buttons and Indicators (aux, phono, sw, lw, mw, fm mono, fm auto)

LOCATION OF CONTROLS—2


①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪

① Speaker Terminals "A"
② Speaker Connection Selector (A ↔ A + B)
③ Clock Selector (50 Hz ↔ 60 Hz)
④ Voltage Selector
⑤ FM Antenna Jack
⑥ AM Antenna Jack
⑦ Auxiliary Jack
⑧ Record/Play Jack
⑨ Speaker Terminals "B"
⑩ AC Power Cord
⑪ Whistle Defeat Switch (A ↔ B)

DIAL CORD STRINGING GUIDE


⑥
⑦
⑤
④
⑧
③
(3 Turns)
⑨
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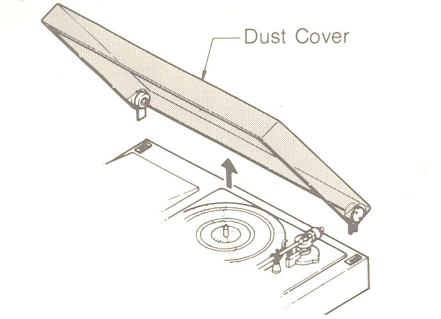
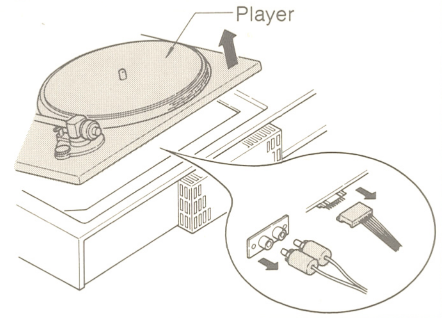
⑪
⑫
①

DISASSEMBLY INSTRUCTIONS

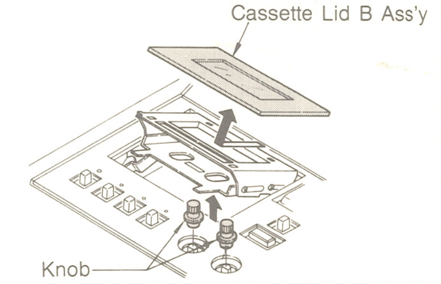
❶ To Remove Dust Cover



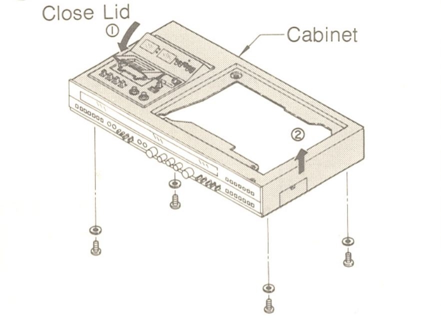
❷ To Remove Record Player



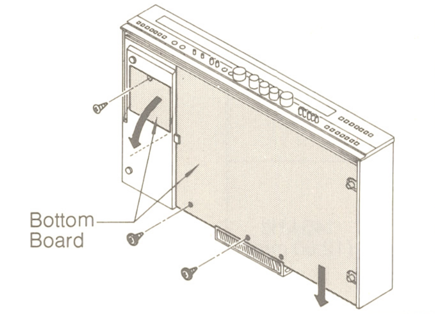
❸ To Remove Cassette Lid B Ass'y and Knobs


Cassette Lid B Ass'y
Knob

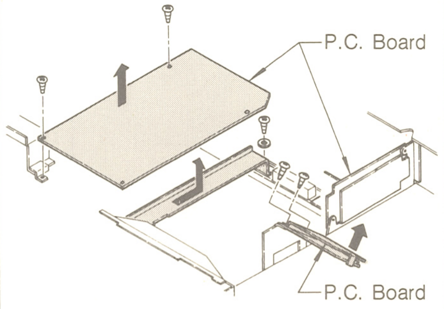
❹ To Remove Cabinet


Close Lid
①
Cabinet
②

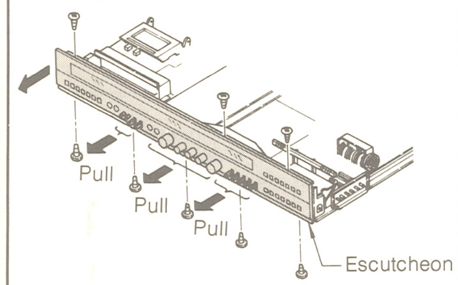
❺ To Remove Bottom Boards


Bottom Board

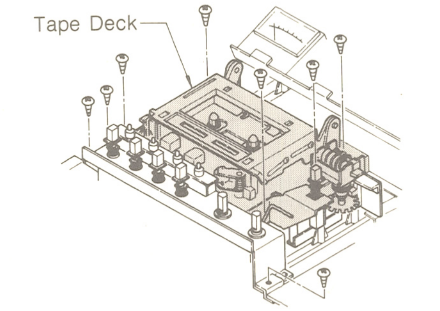
❻ To Remove P.C. Boards


P.C. Board
P.C. Board

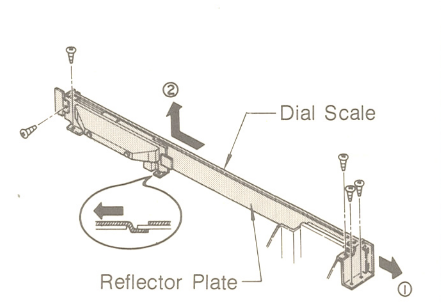
❼ To Remove Escutcheon and Knobs


Pull
Pull
Pull
Escutcheon

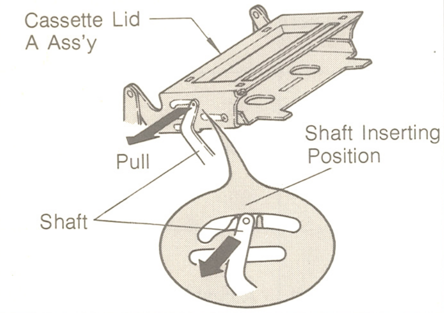
❽ To Remove Tape Deck



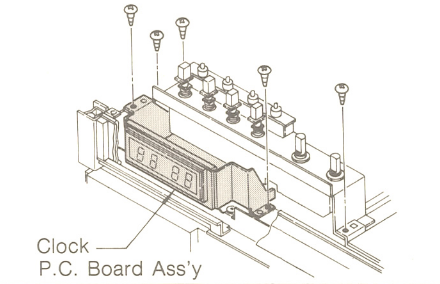
❾ To Replace Dial Scale


②
Dial Scale
Reflector Plate
①

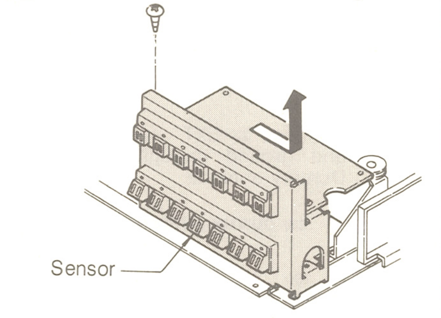
❿ To Replace Cassette Lid A


Cassette Lid A Ass'y
Pull
Shaft Inserting Position
Shaft

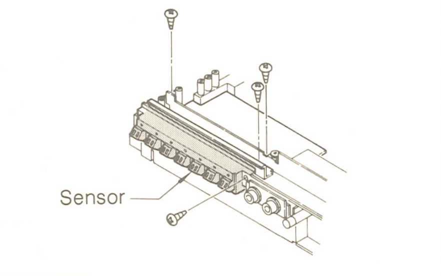
⓫ To Remove Clock P.C. Board Ass'y


Clock P.C. Board Ass'y

⓬ To Remove Sensor Ass'y



⓭ To Remove Tape Deck Sensor Ass'y

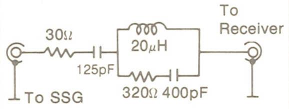


- **To Replace Components**.......................... Refer to ❶ ~ ❻.
- **To Remove Escutcheon**............................ Refer to ❶ ~ ❹ and ❼.
- **To Remove Tape Deck**............................. Refer to ❶ ~ ❹ and ❽.
- **To Remove Dial Scale**............................. Refer to ❶ ~ ❹, ❼ and ❾.
- **To Replace Cassette Lid A Ass'y**........... Refer to ❶ ~ ❹, and ❿.
- **To Remove Clock P.C. Board Ass'y**....... Refer to ❶ ~ ❹, ❼ and ⓫.
- **To Remove Preset Sensor Ass'y**............ Refer to ❶ ~ ❹, ❼ and ⓬.
- **To Remove Tape Deck Sensor Ass'y**..... Refer to ❶ ~ ❹, ❼, ❾, ⓫ and ⓭.

ALIGNMENT INSTRUCTIONS (RADIO)—1

■ AM Alignment

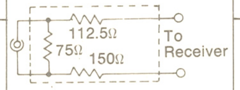
Control Positions:
1. Volume Control .... Max.
2. Hi-Filter Switch .... Off
3. Loudness Switch....... Off
4. Tape Monitor Switch. Source
5. FM Muting Switch ..... Off
6. AFC Switch .... Off
7. Function Sensor........ LW, MW and SW
8. Output of signal generator should be no higher than output reading.

STEP	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (VTVM or SCOPE)	ADJUST	REMARKS
	CONNECTION	FREQUENCY				
AM-IF AND RF ALIGNMENT						
1	Fashion loop of several turns of wire and radiate signal into loop of receiver.	455 kHz 30% Mod. with 400 Hz	Point of non-interference (on/about 1600 kHz	Output meter across speaker jack (L). (Imp. 4～16Ω)	T201 (AM 1st IFT) T202 (AM 2nd IFT) T203 (AM 3rd IFT)	• Adjust for maximum output.
2 (LW)		145 kHz 30% Mod. with 400 Hz	145 kHz (12.60 mm)		L202 (LW ANT Coil) L206 (LW OSC Coil)	• Adjust for maximum output by sliding coil L202 along ferrite core. • Refer to Note.
3 (LW)		350 kHz 30% Mod. with 400 Hz	350 kHz (138.8 mm)		CT205 (LW ANT Trimmer) CT206 (LW OSC Trimmer)	• Adjust for maximum output. • Repeat steps (2) and (3).
4 (MW)		550 kHz 300% Mod. with 400 Hz	550 kHz (16.50 mm)		L201 (MW ANT Coil) L205 (MW OSC Coil)	• Adjust for maximum output by sliding coil L201 along ferrite core. • Refer to Note.
5 (MW)		1500 kHz 30% Mod. with 400 Hz	1500 kHz (134.30 mm)		CT203 (MW ANT Trimmer) CT204 (MW OSC Trimmer)	• Adjust for maximum output. • Repeat steps (4) and (5).
6 (SW)	Connect to EXT. antenna and ground through SW Dummy antenna. **SW DUMMY ANTENNA**  	5.9 MHz 30% Mod. with 400 Hz	5.9 MHz (13.00 mm)		L203 (SW ANT Coil) L204 (SW OSC Coil)	• Adjust for maximum output.
7 (SW)		18 MHz 30% Mod. with 400 Hz	18 MHz (141.30 mm)		CT201 (SW ANT Trimmer) CT202 (SW OSC Trimmer)	• Adjust for maximum output. • Repeat steps (6) and (7).
Note: Cement antenna coil (L201 and L202) with wax after completing alignment.						
AM SIGNAL METER ALIGNMENT						
1	Fashion loop of several turns of wire and radiate signal into loop of receiver.	1000 kHz 30% Mod. with 400 Hz	1000 kHz	Signal Meter	VR203	• By inputing 50 mV/m, adjust for 4.5 indication reading on meter.

ALIGNMENT INSTRUCTIONS (RADIO)—2

■ FM Alignment

Control Positions:
1. Volume Control .... IF (Min.), RF (Max.)
2. Function Sensor........ FM Mono, FM Auto
3. Volume (VR101～104, 201 and 202).. Center
4. FM Preset Volume (VR106～111) .... Counterclockwise

STEP	SIGNAL GENERATOR		RADIO DIAL SETTING	INDICATOR (VTVM or SCOPE)	FM PRESET BUTTON	ADJUST	REMARKS
	CONNECTION	FREQUENCY					
FM-IF AND RF ALIGNMENT							
1	No connection	No signal	Point of non-interference	Tuning meter of receiver	MANUAL	T204-A (Orange core) (Disc IFT)	• Adjust for center position of tuning.
2	Connect to EXT. FM Antenna terminal through dummy antenna. **FM DUMMY ANTENNA**  	106 MHz 30% Mod. with 400 Hz	106 MHz	Output meter across speaker jack (L) (Imp. 4～16Ω)	MANUAL	VR101	• Adjust for maximum output.
3					P1	VR111	• Adjust for maximum output.
4				FM dial meter		VR102	• Adjust for 106 MHz indication reading on meter.
5		87.4 MHz 30% Mod. with 400 Hz	87.4 MHz	Output meter across speaker jack (L) (Imp. 4～16Ω)	MANUAL	VR103	• Adjust for maximum output.
6					P1	VR104	• Adjust for maximum output. • Repeat steps (2), (5) and (6).
Notes: 1. FM Tuner is pre-aligned. Do not touch it. 2. To correct the drift of FM band coverage (87.5～108 MHz), adjust VR101～104 and VR111.							
FM MONO DISTORTION ALIGNMENT							
1	Connect to EXT. FM antenna terminal through dummy antenna.	98 MHz (60 dB) 100% Mod. with 400 Hz	98 MHz	Distortion meter to speaker jack (L).	....	T204-B (Green core) (Disc IFT)	• Adjust for minimum distortion on meter indication.
FM MUTING LEVEL ALIGNMENT							
2	Connect to EXT. FM antenna terminal through dummy antenna.	98 MHz (22 dB) 100% Mod. with 400 Hz	98 MHz	Output meter to speaker jack (L).	....	VR201	• FM AUTO position. • Turn fully clockwise • Adjust to that output can be obtained.
FM SIGNAL METER ALIGNMENT							
1	Connect to EXT. FM antenna terminal through dummy antenna.	98 MHz (120 dB) 100% Mod. with 400 Hz	98 MHz	Signal meter	....	VR202	• Adjust for indication point 5 on meter.

ALIGNMENT INSTRUCTIONS (RADIO)—3

■ FM Stereo Alignment

Control Positions:
Volume Control .... Audible level of speaker sound
Function Sensor .... FM AUTO
FM Preset Sensor .... MANUAL

EQUIPMENT CONNECTION	ADJUST	REMARKS
Connect frequency counter to TP301 and TP205 (ground) at 98 MHz 30% 60 dB input.	VR302	Adjust VR302 for 19 kHz ± 50 Hz on frequency counter reading.

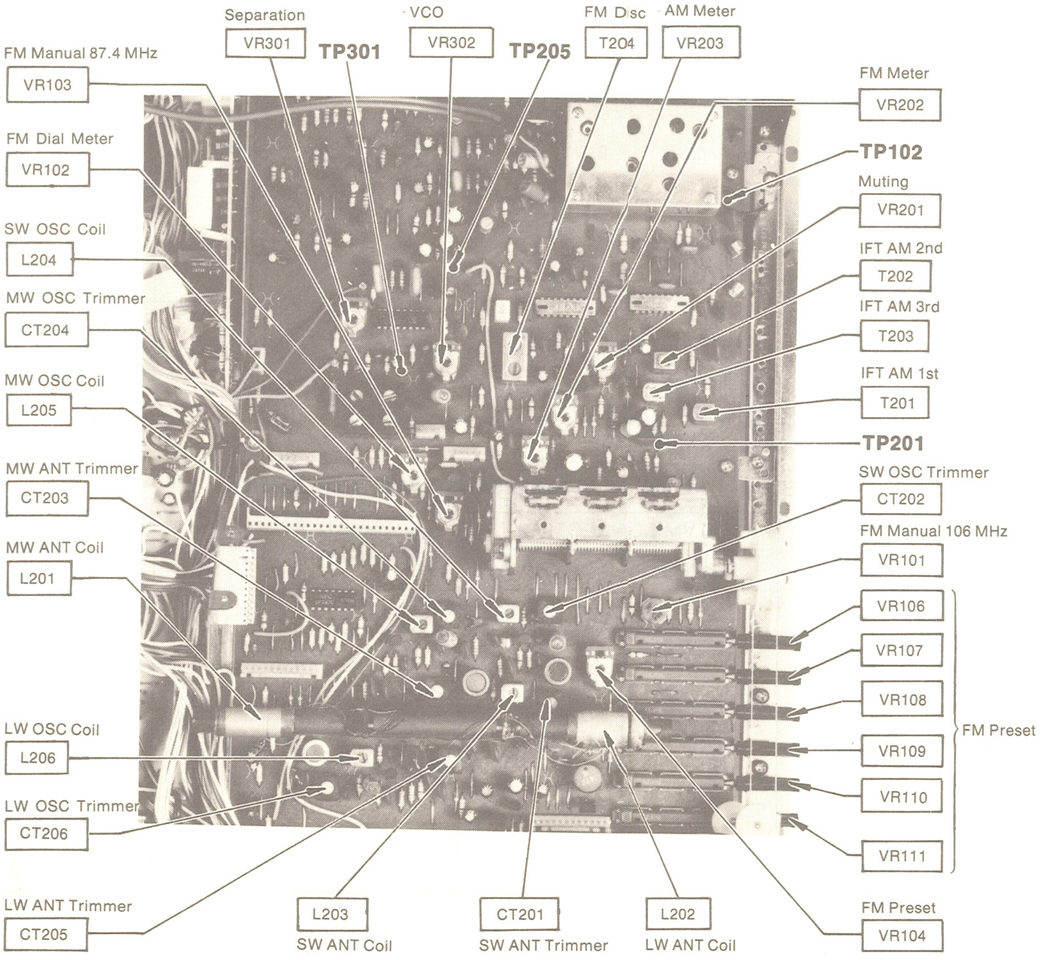
SEPARATION ALIGNMMENT

Control Positions:
1. Stereo Modulator: Connect Stereo Modulator to EXT. Mod. terminal of signal generator.
2. Signal Generator:
   Modulation Rate of 19 kHz Pilot Signal 10%
   Modulation Rate of Right and Left Signal 27%
   Output Level... 60 dB
3. Tuner (Balance Control): Adjust balance control so that output level from both channels becomes equal.

EQUIPMENT CONNECTION			ADJUST	REMARKS
SIGNAL GENERATOR	VTVM	OSCILLOSCOPE		
Connect to EXT. FM antenna terminal through dummy antenna.	Connect across speaker jack. (Imp. 4Ω).	Connect vertical amp. input of scope to terminals of VTVM.	VR301 (Separation Control)	Adjust VR301 for minimum indication of VTVM from the left side output when the right side of stereo modulator is modulated. Adjust VR301 in the same way for the right side. Adjust for best balance between "L to R" and "R to L" separation.

Note: When aligning separation, disconnect frequency counter.

ALIGNMENT POINTS (RADIO)



Separation
VR301
TP301
VCO
VR302
TP205
FM Disc
T204
AM Meter
VR203
FM Manual 87.4 MHz
VR103
FM Dial Meter
VR102
SW OSC Coil
L204
MW OSC Trimmer
CT204
MW OSC Coil
L205
MW ANT Trimmer
CT203
MW ANT Coil
L201
LW OSC Coil
L206
LW OSC Trimmer
CT206
LW ANT Trimmer
CT205
FM Meter
VR202
TP102
Muting
VR201
IFT AM 2nd
T202
IFT AM 3rd
T203
IFT AM 1st
T201
TP201
SW OSC Trimmer
CT202
FM Manual 106 MHz
VR101
VR106
VR107
VR108
VR109
VR110
VR111
FM Preset
FM Preset
VR104
L203
SW ANT Coil
CT201
SW ANT Trimmer
L202
LW ANT Coil

ALIGNMENT INSTRUCTIONS (TAPE DECK)—1

■ Tape Deck Alignment

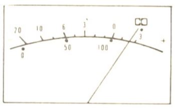
BIAS ALIGNMENT

Control Positions:
1. Tape Deck Sensor .... Record.
2. Dolby Switch .... OUT

STEP	ALIGNMENT ITEM	VTVM CONNECTION		TAPE SELECTOR	WHISTLE DEFEAT SWITCH	ADJUST	REMARKS
		Positive	Negative				
1	OSC Coil	TP803	TP804	NORMAL	A	L805	• Adjust L805 for max. indication on VTVM and should be within 10 mV when the whistel defeat switch is B.
2	Erase Current			CrO_2	A and B	VR801	• Adjust VR801 for 250 ± 10 mV indication on VTVM.
3	Recording Bias	TP401 TP402	TP403	NORMAL	A	VR803 VR802	• Adjust VR803 and VR802 for 2.7 ± 0.1 mV indication on VTVM.

PLAYBACK ALIGNMENT

Control Positions:
1. Tape Deck Sensor........................ PLAY
2. Tape Selector............................. NORMAL

STEP	ALIGNMENT ITEM	VTVM CONNECTION		TEST TAPE	DOLBY SWITCH	ADJUST	REMARKS
		Positive	Negative				
1	R/P Heead Azimuth	....	....	VTT653	OUT	Head Screw	• Adjust screw for max. indication on VTVM.
2	Dolby Level	TP801 TP802	TP403	TMT6130	IN	VR401 VR402	• Adjust VR401 and VR402 for 580 mV indication on VTVM.
3	VU Meter	....	....			VR807 VR808	• Adjust VR807 and VR808 so that needle just defects at **+3 dB** (DD mark). 
4	Peak Indicator	....	....			VR806	• Adjust VR806 so that peak indicator (**+3 dB**) lights on.

Notes: 1. L801 and L802 are pre-aligned. Do not touch them.
2. TMT6130 is DOLBY LEVEL calibration tape.

RECORDING AND PLAYBACK SENSITIVITY ALIGNMENT

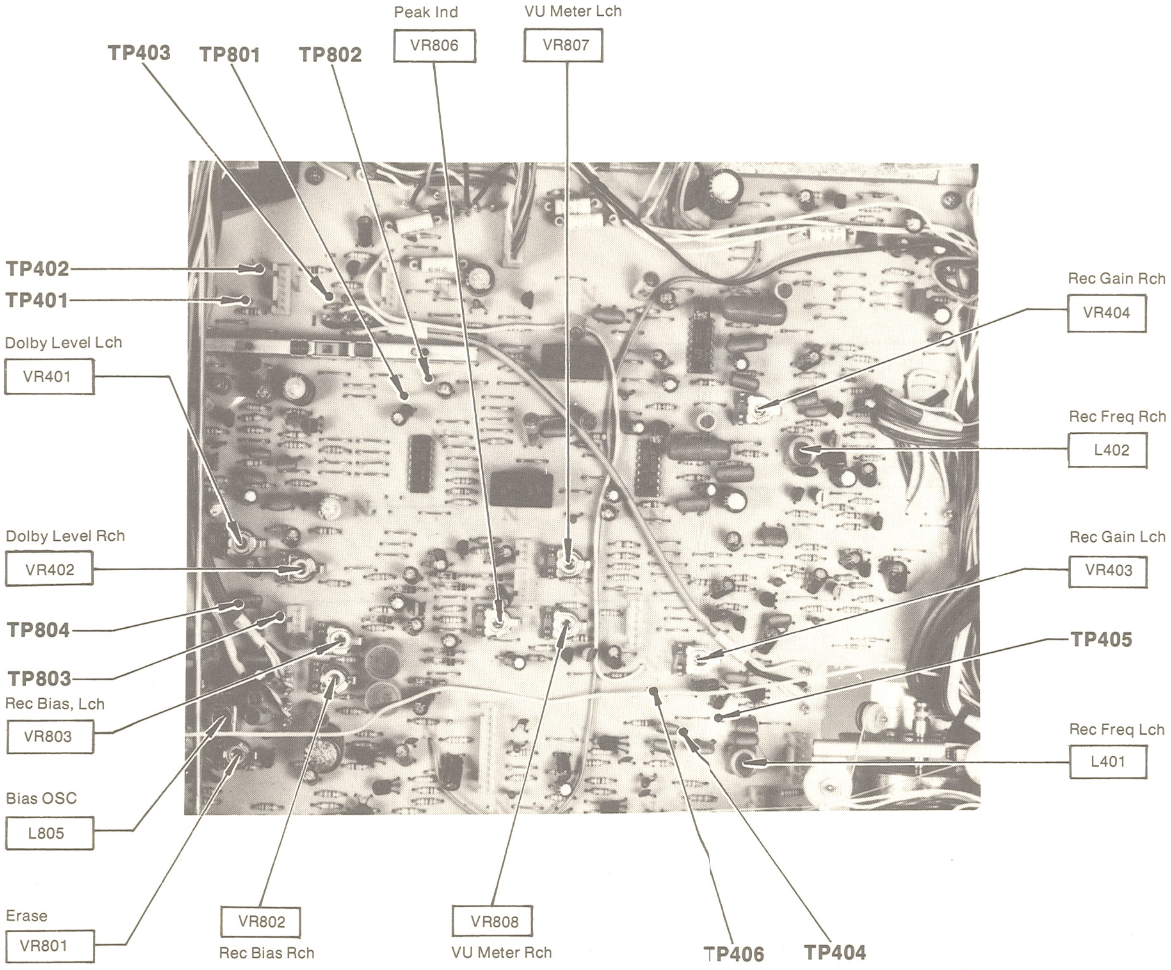
STEP	SIGNAL GENERATOR		VTVM CONNECTION		TAPE DECK SENSOR	TEST TAPE	REMARKS
	Frequency	Connection	Positive	Negative			
1	1 kHz 300 mV	REC/PLAY	TP801 TP802	TP403	RECORD or PLAYBACK	NORMAL	• Set Volume Control (VR403,404) to center position. • Dolby switch to OUT. • Adjust Rec Level volume for 260 mV indication on both VTVM. • Check 260 mV indication on both VTVM by recording and playback. • 260 mV indication on both VTVM if not obtained, adjust VR403 and VR404.

ALIGNMENT INSTRUCTIONS (TAPE DECK)—2

RECORDING AND PLAYBACK FREQUENCY RESPONSE ALIGNMENT

STEP	SIGNAL GENERATOR		VTVM CONNECTION		TAPE DECK SENSOR	TEST TAPE	REMARKS
	Frequency	Connection	Positive	Negative			
1	1 kHz 300 mV	REC/PLAY	....	....	RECORD	NORMAL	• Adjust Rec Volume for 0 VU on VU meter, then lower the signal generator input to −20 dB and set Rec Condition.
2	15 kHz		TP405 TP406	TP404			• Connect TP805 to TP804. • Adjust L401 and L402 for max. indication on VTVM.
3	1 kHz and 12.5 kHz		TP801 TP802	TP403	RECORD and PLAYBACK		• Response difference should be within ±2 dB at 12.5 kHz vs. 1 kHz. If below −2 dB readjust by following step 2 with input frequency 13 ~ 13.5 kHz. If over +2 dB, readjust Rec. Bias 2.9 ~ 3.0 mV.
4						CrO_2 and Fe-Cr	• Response difference should be within 3.5 dB at 12.5 kHz vs. 1 kHz. If it is not, repeat steps 2 ~ 4.

ALIGNMENT POINTS (CASSETTE TAPE DECK)


Peak Ind
VR806
VU Meter Lch
VR807
TP403
TP801
TP802
TP402
TP401
Dolby Level Lch
VR401
Dolby Level Rch
VR402
TP804
TP803
Rec Bias, Lch
VR803
Bias OSC
L805
Erase
VR801
VR802
Rec Bias Rch
VR808
VU Meter Rch
TP406
TP404
Rec Gain Rch
VR404
Rec Freq Rch
L402
Rec Gain Lch
VR403
TP405
Rec Freq Lch
L401

OPERATION TEST INSTRUCTIONS—1

After repairing, check the operation by the following procedure.

■ FM AUTO, MANUAL PREFERENCE TEST

Power Switch	Operation Selector Switch	Operation
ON	ON	FM Auto, Manual.

Function Sensor	FM Preset Sensor	Function Sensor
Except FM Auto	$P_1 \sim P_6$, FM Manual.	FM Auto.

■ SPEAKER TEST

Connect speakers to speaker terminals respectively.

Speaker Switch		Connection Selector Switch	Operation
A	B		
ON	OFF	A or A + B	Speaker A
ON	ON	A	Speaker A
		A + B	Speaker A and B. Refer to Note.
OFF	ON	A or A + B	Speaker B
OFF	OFF	A or A + B	OFF

Note: Confirm that both speakers A and B do not make any sound when either of them is disconnected.

■ CLOCK AND TIMER TEST

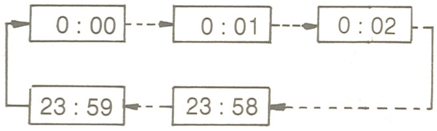
Power Switch............... ON
Operation Switch......... OFF

1. Clock Switch Test

	Clock Display Switch	
	BRIGHT	DIM
Clock Display Indication	Bright	Dim

	Clock Switch	
	50 Hz	60 Hz
Clock Display Indication	Fast go on and off.	Slow go on and off.

2. Timer Adjustment Test

Display Switch	Adjust Switch	Clock Display Indication
Clock Adjust or Timer Adjust.	Slow or Fast.	Changing in order slow or fast. 
Center	Center	Indication stops and timer just set.

OPERATION TEST INSTRUCTIONS—2

3. Timer Set Test

Display Switch	Adjust Switch	Clock Display Indication
Center	Center	Present time
Timer Adjust	Center	Timer set time

4. Timer Test

Timer Switch	Timer ON Indication	Power Switches
ON	Turns ON	Clock power ON only.
OFF	Turns OFF	

Timer Switch	Clock Display Indication	Power Switches
ON	Put the timer set time and clock time to the same.	All ON

Timer Switch	Tape Kind	Timer Function Switch		Operation
		Position	Indictation	
ON	....	Center	FM-ON	FM AUTO, MANUAL operative.
	With recording tab.	Up	FM-REC	FM AUTO, MANUAL recorded.
	Without recording tab.			FM AUTO, MANUAL → Cassette play.
	....	Down	Cassette play.	Cassette play operative.

5. Sleep Test

Sleep Switch	Operation
Set	1. All powers turn ON and clock display starts from $\boxed{0:59}$ and down. ($\boxed{0:59}$ → $\boxed{0:58}$ → ...). 2. When clock display reaches $\boxed{0:01}$, set timer switch to the center position and check whether the main power off within a minute except clock.
Clear	Clock power ON only.

■ CASSETTE TAPE DECK TEST

Power Switch............... ON
Operation Switch......... ON

1. Rewind/Play Test

Tape Counter	Memory Switch	Tape Deck Sensor	Operation
$\boxed{000}$	ON	↗ REWIND/PLAY	Tape counter reaches $\boxed{000}$, then tape turns to play.
$\boxed{000}$	ON	PLAY or FF → REWIND	Tape counter reaches $\boxed{000}$, tape stops.
....	OFF	↘ REWIND/PLAY	Rewind operation are completed, then tape turns to play.

OPERATION TEST INSTRUCTIONS—3

2. Tape Preference Test

Function Sensor	Tape Deck Sensor	Operation
AUX, PH, SW, LW, MW, FM MONO or FM AUTO	PLAY	Turns to tape play.
	REWIND/PLAY	Both operative → Tape play.
	FF or REWIND	Both operative.

Tape Deck Sensor	Function Sencor	Operation
PLAY	AUX	AUX
	PH	PH
	SW	SW
	LW	LW
	MW	MW
	FM MONO	FM MONO
	FM AUTO	FM AUTO
REWIND/PLAY	AUX, PH, SW, LW, MW, FM MONO or FM AUTO	Both operative → Tape play.
FF or REWIND/PLAY		Both operative.

3. Full Auto Shut Off Test

Function Sensor	Stop Indication
FF, REWIND or REWIND/PLAY → STOP	OFF
PLAY → STOP	ON
PLAY → FF or REWIND → STOP	ON

4. Record Hold Test

Tape Deck	Function Sensor	Operation
Some Record Condition.	AUX, PH, SW, LW, FM, FM MONO or FM AUTO.	No change in record condition.

5. Mic. Rec Preference Test

Function Sensor	Microphone	Tape Deck	Operation
AUX, PH, SW, LW, MW, FM MONO or FM AUTO.	Inserted into Mic. Jack	Record condition.	Changes into Mic. Rec condition.

OPERATION TEST INSTRUCTIONS—4

■ PLAYER TEST

Power Switch............... ON
Operation Switch......... ON
Function Sensor .... PH

1. Cue Test

Functtion Sensor	Cue Indication	Tone Arm
Cue (Touch First)	ON	Up
Cue (Touch Second)	OFF	Down

2. Stop Test (Record Playing Condition)

Function Sensor	Operation		
	Tone Arm	Stop Indicator	Cue Indicator
STOP	Up→Return→Down	ON → OFF	ON → OFF

Function Sensor	Tone Arm
Touch except PH	Up → Return → Down

3. Auto Return Test

When the Tone Arm reaches record ending position .....

Tone Arm	Cue Indicator
Up → Return → Down	ON → OFF

4. Synchro Start Test

Function Sensor .... PH
Cassette REC............... ON

Function Sensor	Operation
Cue (Touch First)	Tone arm "UP" (then take it on record by hand).
Cue (Touch Second)	Tone Arm Down on record → Tape "REC-PAUSE".
Stop, Cue or Auto Return.	Tape "REC-PLAY" → Tape "REC-PAUSE".

DOLBY NOISE REDUCTION SYSTEM–1

GENERAL DESCRIPTION

The Dolby B-Type Noise Reduction System is used in this equipment. It reduces the level of background noise, normally introduced during tape recordings without changing the frequency response of the audio signal.

METHOD OF DOLBY SYSTEM

Signal deviation of Dolby System is shown in **Fig. 1**. **Fig. 1** shows the Record (Encoding) and Playback (Decoding) characteristics for a signal of about 5 kHz at different signal levels.

For example, following a level in **Fig. 1**.

1. When −30 dB REC signal is applied.
   It is boosted to −20 dB and recorded on a magnetic tape. [ENCODED or COMPRESSED]
2. Playing back this recorded tape (at −20 dB).
   The output signal is attenuated by the Dolby System and reproduced at −30 dB, the same level as recorded. [DECODED or EXPANDED]

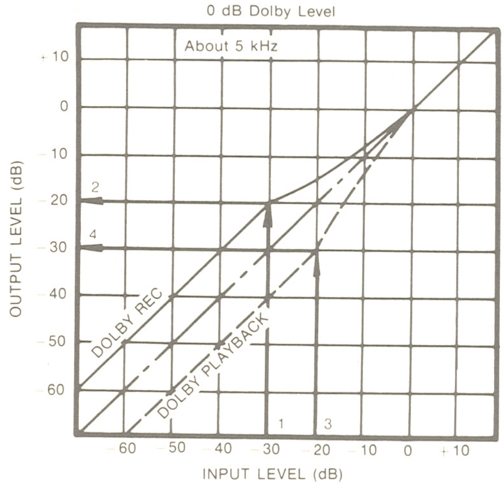


FIG. 1

Fig. 2 shows the boosting characteristics of the frequencies for different signal levels.

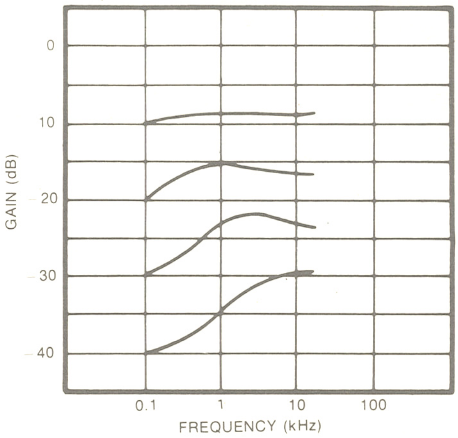


FIG. 2

Fig. 3 shows the general boosting vs. attenuation characteristics for record and playback with the resulting overall Record Playback response.

The point at which the Record and Playback curve flattens out the 0 dB level and it is called the Dolby Level.

The Dolby level corresponds to a level at which the magnetic flux density of the signal recorded on tape is 200 pwb/mm and is indicated by +3 dB on the VU meter of this unit.

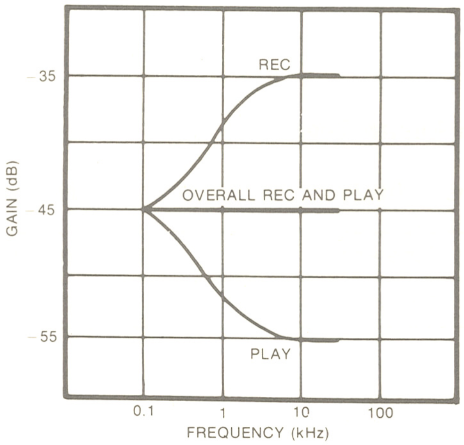


FIG. 3

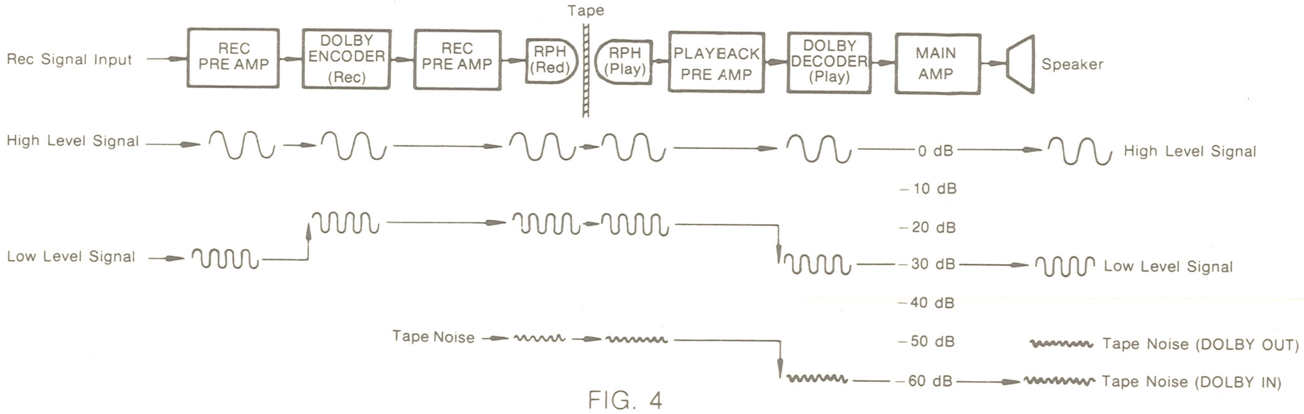

Tape
Rec Signal Input
REC PRE AMP
DOLBY ENCODER (Rec)
REC PRE AMP
RPH (Red)
RPH (Play)
PLAYBACK PRE AMP
DOLBY DECODER (Play)
MAIN AMP
Speaker
High Level Signal
0 dB
High Level Signal
−10 dB
−20 dB
Low Level Signal
−30 dB
Low Level Signal
−40 dB
Tape Noise
−50 dB
Tape Noise (DOLBY OUT)
−60 dB
Tape Noise (DOLBY IN)

FIG. 4

DOLBY NOISE REDUCTION SYSTEM–2

PRINCIPLE OF NOISE REDUCTION

Much of the audible noise is a hiss noise in the medium and high frequencies created during the recording process on magnetic tape, while some of the noise is playback amplifier noise.

At high input levels the noise is suppressed, however, at low input signal levels the Signal to Noise Ratio (S/N) decreases and the noise is heard.

The Dolby System in this unit is designed to solve this problem by boosting the low level mid and high frequencies by about 10 dB during recording (compressing) and attenuating (expanding) the same signals during playback by an equal amount, as shown in **Fig. 4**.

The amount of boost/attenuation depends on the level and the frequency of the signal.

Fig. 5 shows the noise reduction with Dolby "IN" vs. Dolby "OUT".

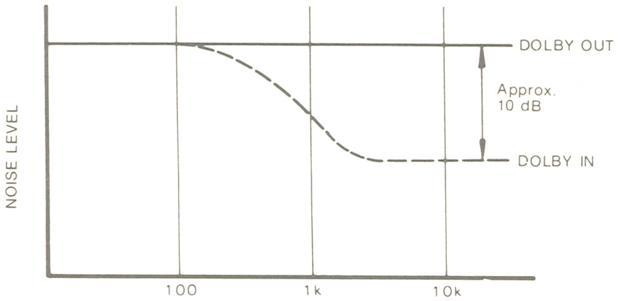


FIG. 5

CIRCUIT OPERATION

The operation of the Noise Reduction System is shown in the Block Diagram of **Fig. 6**. By turning the Rec/Play switch to Record or Play and the Dolby In/Out switch to IN this circuit operates either in the Encode or Decode mode, as follows:

[ENCODE]: ST1, ST2 and ST8 in RECORD position.

The recording signal is applied to the REC AMP and passes through AMP "A" of the Dolby IC and the low-pass-filter (LPF), and enters AMP "B" the LPF attenuates unwanted frequencies such as tape recorder bias of FM MPX sub. carrier signals to the level which will not influence the Dolby circuit operation. The output signal of AMP "B" is divided into two paths; one is directly supplied to ADDER "E", and is called a direct signal, while the other controls the noise reduction signal. This signal, passing through ST8, S7-1, high-pass-filter (HPF), variable resistance "F" and AMP "C", enters ADDER "E" and increases the direct signal.

As a result the REC signal from INVERTER "K" is boosted.

[DECODE]: Essentially the same circuitry.
ST1, ST2 and ST8 in PLAY position.

The playback signal from the playback head (RPH) is applied to PLAYBACK PRE AMP and passes through ST2, AMP "A" of the Dolby IC, "LPF" and AMP "B", and then it enters ADDER "E" as the direct signal. One part of output signal from INVERTER "K", passing through ST8, is supplied to the MAIN AMP, and the other, as Noise Reduction Signal, passes through S7-1, "HPF".

Variable Resistance "F" and AMP "C", are applied to ADDER "E" in opposite phase. As a result, the level of the playback signal is attenuated. This circuit operates to boost at REC position [ENCODE] and to attenuate at PLAY position [DECODE].

"G" is the rectifying and smoothing circuit of Noise Reduction Signal and controls Variable Resistance "F". And "F" and "HPF" compose the dynamic high pass filter, and control the boosting and attenuating degree of high and medium frequency in response to the signal level (**Fig. 2** and **Fig. 3**). "T" is the circuit setting the response time of Dolby.

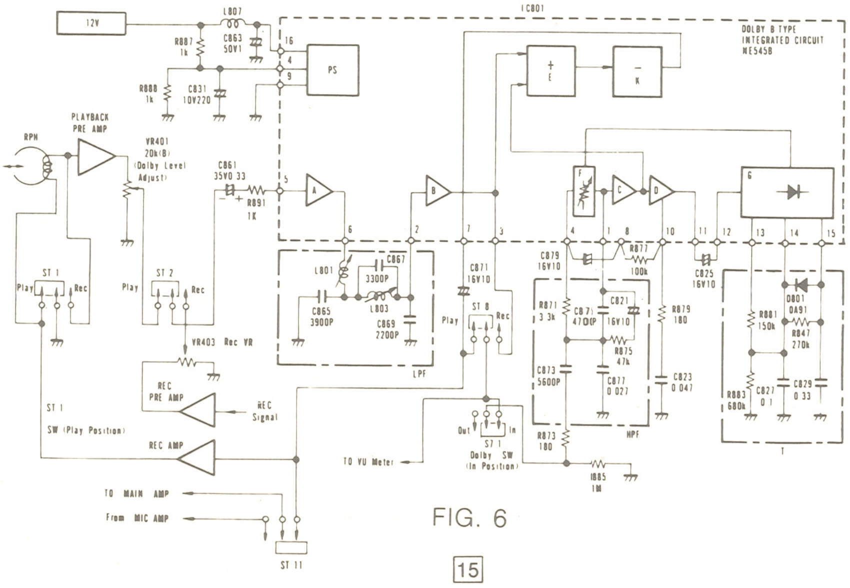
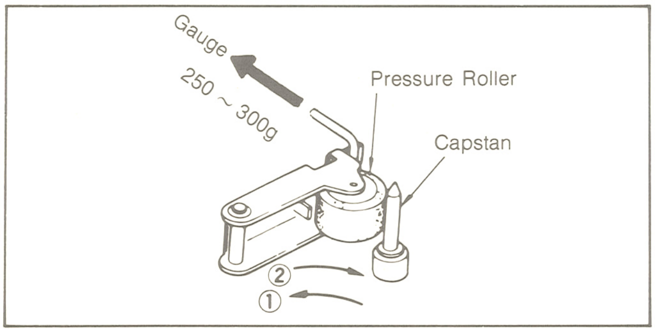

12V
L807
R887 1k
C863 50V1
R888 1k
C831 10V220
PS
IC801
DOLBY B TYPE INTEGRATED CIRCUIT NE545B
E
K
RPH
PLAYBACK PRE AMP
VR401 20k(B) (Dolby Level Adjust)
C861 35V0 33
R891 1K
A
B
C
D
F
G
16
4
9
5
6
2
7
3
1
8
10
11
12
13
14
15
L801
C867 3300P
C865 3900P
L803
C869 2200P
LPF
C871 16V10
ST 8
Play
Rec
C879 16V10
R877 100k
C825 16V10
R871 3 3k
C871 470P
C821 16V10
R875 47k
R879 180
C873 5600P
C877 0 027
C823 0 047
HPF
R873 180
I885 1M
D801 0A91
R881 150k
R847 270k
R883 680k
C827 0 1
C829 0 33
T
ST 1
Play
Rec
ST 2
Play
Rec
VR403 Rec VR
REC PRE AMP
REC Signal
ST 1 SW (Play Position)
REC AMP
Out
In
S7 1 Dolby SW (In Position)
TO VU Meter
TO MAIN AMP
From MIC AMP
ST 11

FIG. 6

MECHANICAL ADJUSTMENT OF CASSETTE TAPE DECK

PRESSURE ROLLER ADJUSTMENT

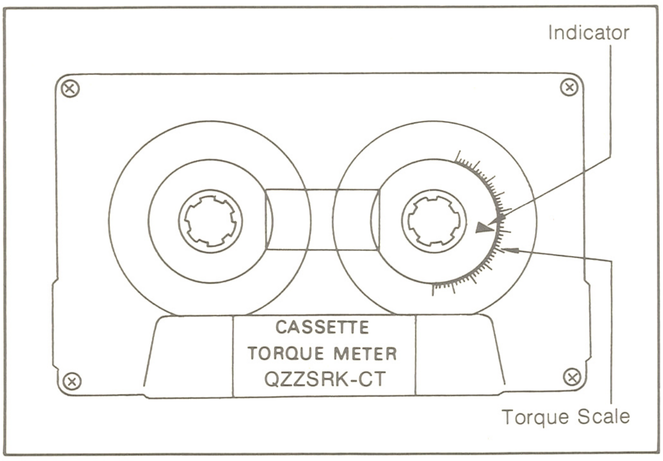
1. Switch set to PLAY. (Do not insert cassette.)
2. Hook gauge to arm of pressure roller.


Gauge
250 ~ 300g
Pressure Roller
Capstan
②
①

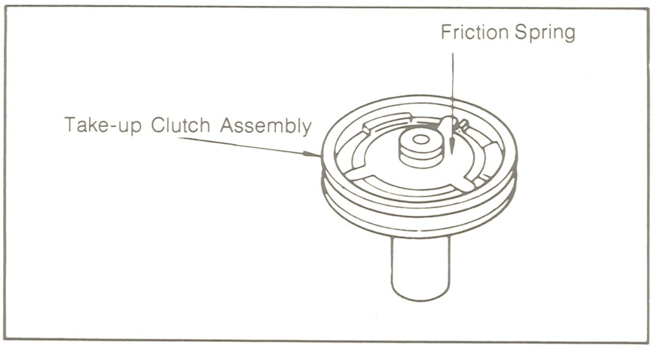
3. Pull pressure roller away from the capstan in the direction of arrow 1 with spring gauge and slowly permit the pressure roller to return toward capstan in the direction of arrow 2.
4. Measure tension at time when pressure roller makes contact with capstan (or when pressure roller starts rotating.)
5. The standard tension of pressure roller should be 250 ~ 380g.
6. If pressure is not within these limits;
   Clean the rubber roller and capstan with a soft cloth moistened with alcohol or replace pressure spring.

TAKE-UP TORQUE ADJUSTMENT

* Test Tape: QZZSRK-CT (Take-up Torque Meter)
1. Insert test tape.
2. Rewind the tape to its starting point.
3. Switch set to PLAY.
4. Read "▶" mark of indicator on take-up side.

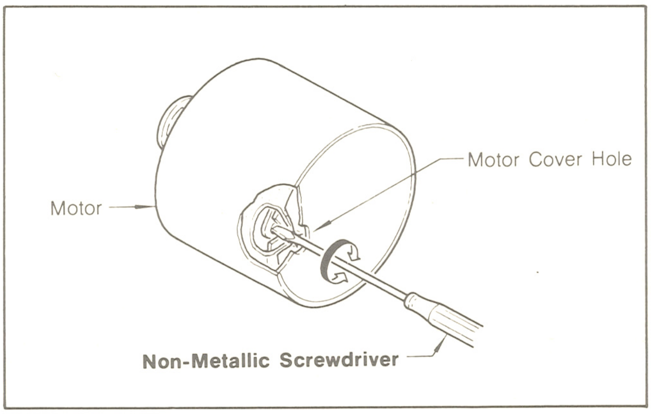

Indicator
CASSETTE
TORQUE METER
QZZSRK-CT
Torque Scale

5. Repeat PLAY-STOP several times and read the average tension.
6. The standard take-up tension should be 30 ~ 70 g.cm. If take-up tension is not within these limits;
   a) Clean main belt, take-up reel and all parts which contact them with a cotton swab moistened with alcohol, and/or
   b) Switch set to "OFF", remove main belt and make sure that take-up reel and take-up clutch are rotating smoothly.
   c) Change take-up clutch tension by turning the friction spring under reel table, and/or
   d) Replace take-up clutch.


Friction Spring
Take-up Clutch Assembly

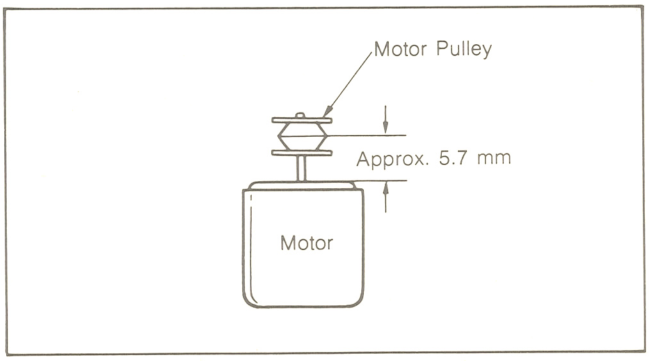
CASSETTE TAPE DECK MOTOR SPEED ADJUSTMENT

1. Remove cassette tape deck. (Refer to Disassembly Instruction.)
2. Insert **Non-metallic screwdriver** to motor cover hole.
3. Fast adjust: Clockwise.
   Slow adjust: Counterclockwise.


Motor Cover Hole
Motor
Non-Metallic Screwdriver

MOTOR PULLEY ADJUSTMENT

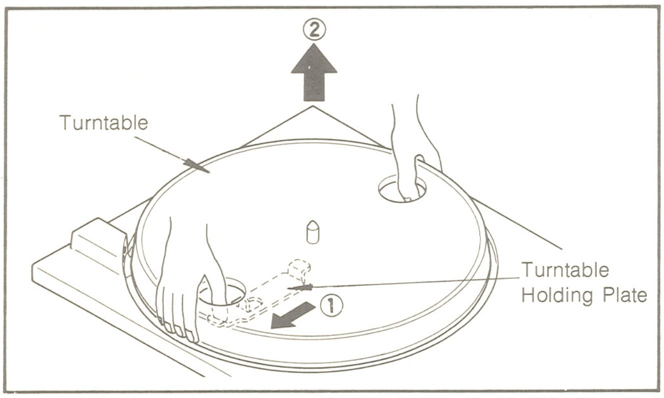
When replacing the motor, adjust the clearance between motor and motor pulley as in figure below.


Motor Pulley
Approx. 5.7 mm
Motor

SERVICING THE RECORD PLAYER

TO REMOVE TURNTABLE

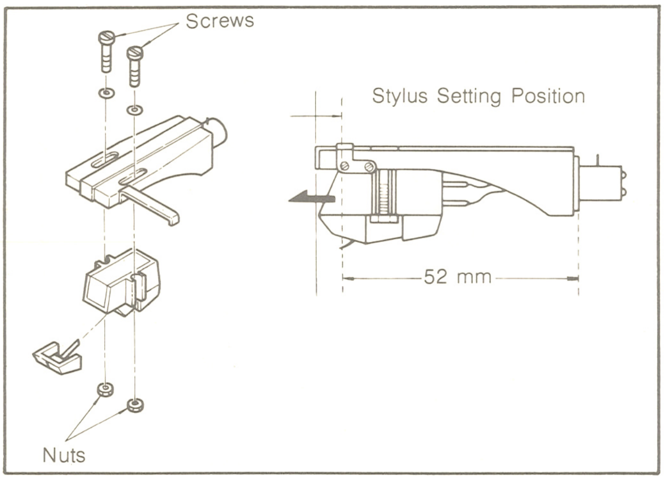
To remove the turntable, slide the holding plate to the direction of an arrow ① and then lift up.



CARTRIDGE REPLACEMENT

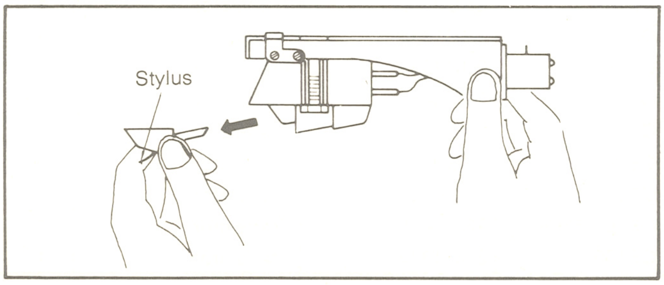
1. Remove the headshell fixing nut by turning it clockwise and remove headshell from pickup arm.
2. Remove cartridge from headshell by removing the two screws and disconnecting the lead wires from cartridge.
3. Using the two nuts attached, mount a new cartridge onto headshell so that the cartridge is perpendicular to the disc surface.
4. Install headshell to pickup arm.

Note:
Correct stylus position can be obtained by relocating the cartridge.



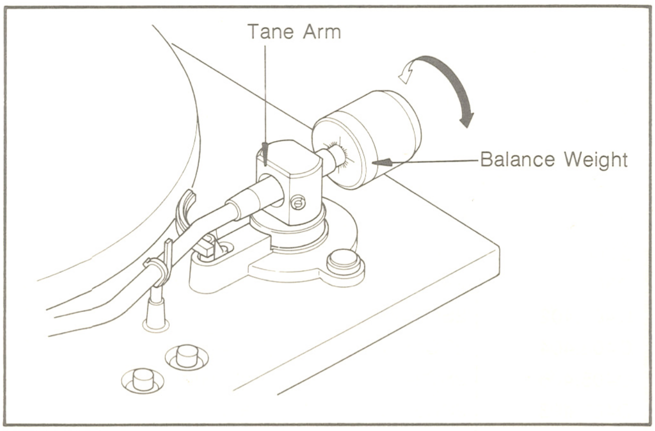
STYLUS REPLACEMENT

1. Lift pickup arm to a position that will make the stylus accessible.
2. Gently remove worn stylus and replace it with a new one.



STYLUS PRESSURE ADJUSTMENT

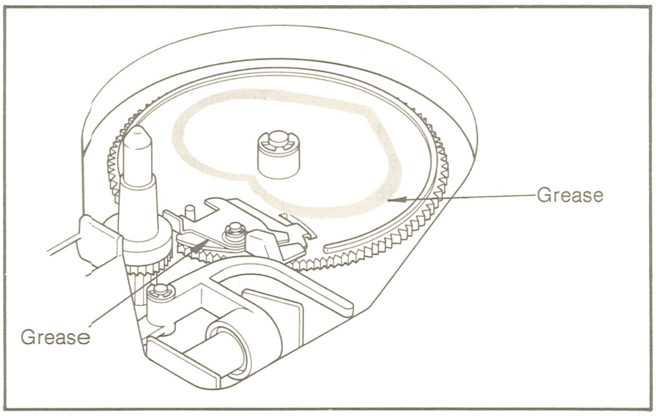
1. Release pickup arm from its seated position. Place a record on the turntable. Then, balance the pickup arm by turning in or out the balance weight until the stylus is leveled to the surface of the record (as viewed from the turntable unit side).
2. Set the stylus pressure dial to "0", and since the specified stylus pressure of the cartridge is 2.0 grams, set the balance weight dial to "2" by turning the weight counterclockwise (as viewed from the front panel side).

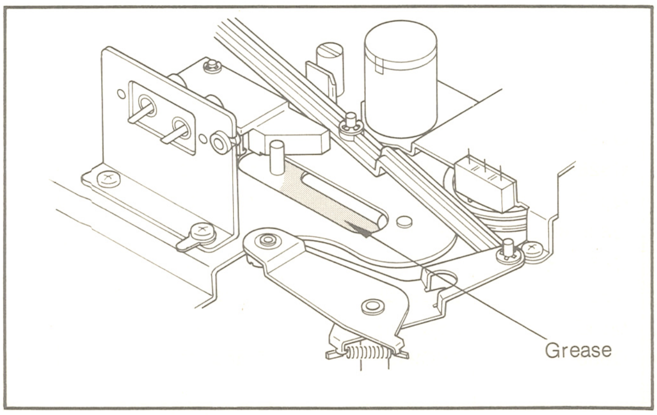


LUBRICATION

The record player has been thoroughly lubricated at the factory and under normal use should not be required additional lubrication. When replacing some parts, however, it may be necessary to lubricate the parts as specified.

Note:
Do not allow grease to touch motor pulley, belt and turntable.





REPLACEMENT PARTS LIST

NOTES:

1. Components identified by S mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
2. Parts No. listed in this parts list are of Service Parts.

Ref. No.	Part No.	Description	Per Set (pcs.)
TRANSISTORS			
Q101,102	2SC945L	Transistor	2
Q103	2SA991	Transistor	1
Q104,105	2SA666	Transistor	2
Q201,202	2SC945L	Transistor	2
Q203	2SL945L	Transistor	1
Q204,205	2SC1359	Transistor	2
Q206	2SC1359	Transistor	1
Q301	2SC945L	Transistor	1
Q401,402	2SC1327	Transistor	2
Q403,404	2SC1327	Transistor	2
Q405,406	2SC945L	Transistor	2
Q407,408	2SC945L	Transistor	2
Q409,410	2SC945L	Transistor	2
Q411,412	2SC945L	Transistor	2
Q413,414	2SC945L	Transistor	2
Q415,416	2SC1327	Transistor	2
Q501,502	2SC945L	Transistor	2
Q503,504	2SC1327	Transistor	2
Q505,506	2SC828	Transistor	2
Q507,508	2SC1844	Transistor	2
Q509,510	2SC1844	Transistor	2
Q511,512	2SC945L	Transistor	2
Q601,602	2SC1844	Transistor	2
Q603,604	2SC1327	Transistor	2
Q701,702	2SC1844	Transistor	2
Q801	2SC945L	Transistor	1
Q802	2SC1846	Transistor	1
Q803,804	2SC945L	Transistor	2
Q805,806	2SC945L	Transistor	2
Q807,808	2SC945L	Transistor	2
Q809	N13T1	Transistor	1
Q810	2SA666	Transistor	1
Q811	2SA683	Transistor	1
Q812	2SD793	Transistor	1
Q821,822	2SA666	Transistor	2
Q823,824	2SA666	Transistor	2
Q825	2SC945L	Transistor	1
Q826	2SA666	Transistor	1
Q827	2SC945L	Transistor	1
Q828	2SA666	Transistor	1
Q829	2SC945L	Transistor	1
Q830,831	2SA666	Transistor	2
Q832,833	2SC945L	Transistor	2
Q834	2SC945L	Transistor	1
Q835	2SC1383	Transistor	1
Q836	2SC945L	Transistor	1
Q901	2SD560FV	Transistor	1
Q902	2SC945L	Transistor	1
Q903	2SD560FV	Transistor	1
Q904	2SC945L	Transistor	1
Q905	2SD560FV	Transistor	1
Q906	2SC945L	Transistor	1
Q907	2SC1226A	Transistor	1
Q908	2SC945L	transistor	1
Q909	2SA683	Transistor	1
Q910	2SC1846	Transistor	1
Q911	2SA683	Transistor	1
Q8101	2SA733A-Q1Y	Transistor	1
Q8102	2SA666	Transistor	1
Q8103	2SA733A-Q1Y	Transistor	1
Q8104	2SA666	Transistor	1
Q8105	2SA733A-Q1Y	Transistor	1
Q8106	2SA666	Transistor	1
Q8107	2SA733A-Q1Y	Transistor	1
Q8108	2SA666	Transistor	1
Q8109	2SA733A-Q1Y	Transistor	1
Q8110	2SA666	Transistor	1
Q8111	2SA733A-Q1Y	Transistor	1
Q8112	2SA666	Transistor	1
Q8113	2SA733A-Q1Y	Transistor	1
Q8114	2SA666	Transistor	1
Q8121	2SC1317	Transistor	1
Q8122,8123	2SC945L	Transistor	2
Q8124,8125	2SC945L	Transistor	2
Q8126,8127	2SC945L	Transistor	2
Q8128,8129	2SC945L	Transistor	2
Q8130	2SA666	Transistor	1
Q8131	2SC945L	Transistor	1
Q8132,8133	2SC945L	Transistor	2
Q8134,8135	2SC945L	Transistor	2
Q8136,8137	2SC945L	Transistor	2
Q8138	2SC945L	Transistor	1
Q8139,8140	2SC945L	Transistor	2
Q8141,8142	2SC945L	Transistor	2
Q8151	2SC945L	Transistor	1
Q8152	2SC1383	Transistor	1
Q8153	2SC945L	Transistor	1
Q8154	2SC1383	Transistor	1
Q8155,8156	2SA683	Transistor	2
Q8157	2SC945L	Transistor	1
Q8158	2SC1383	Transistor	1
Q8159	2SC945L	Transistor	1
Q8160	2SC1317	Transistor	1
Q8161	2SC1847	Transistor	1
Q8162	2SC945L	Transistor	1
Q8163	2SC1317	Transistor	1
Q8164,8165	2SC945L	Transistor	2
Q8166	2SC1383	Transistor	1
Q8167,8168	2SC945L	Transistor	1
Q8169	2SC1317	Transistor	1

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	Per Set (pcs.)
Q8170	2SC1847	Transistor	1
Q8171	2SC1383	Transistor	1
Q8172,8174	2SC1846	Transistor	2
Q8175	2SA885	Transistor	1
Q8181	2SD612	Transistor	1
Q8182	2SA101	Transistor	1

TRANSISTORS (RECORD PLAYER)

Q641,642	2SA733A-Q1Y	Transistor	2
Q643,644	2SC945L	Transistor	2
Q645,646	2SC945L	Transistor	2
Q648,647	2SC1847	Transistor	2
Q649,650	2SC945L	Transistor	2
Q651,652	2SC945L	Transistor	2
Q653	2SC1847	Transistor	1
Q654,655	2SC945L	Transistor	2
Q656	2SC1317	Transistor	1
Q657	M21C	Thyristor	1

INTEGRATED CIRCUITS

Ref. No.	Part No.	Description	Per Set (pcs.)
IC101	SN94042N	Integrated Circuit	1
IC102	SN94041N	Integrated Circuit	1
IC103	UPC78L12	Integrated Circuit	1
IC201	AN217	Integrated Circuit	1
IC202	AN377	Integrated Circuit	1
IC301	LA3350SS	integrated Circuit	1
IC401	UPD4066C	Integrated Circuit	1
IC501,502	UPD4066C	integrated Circuit	2
IC503,504	UPD4066C	integrated Circuit	2
IC701,702	STK082-105	Integrated Circuit	2
IC801,802	NE545B	integrated Circuit	2
IC803	TM4801AP	integrated Circuit	1
IC804,805	UPC1009C	integrated Circuit	2
IC806	UPA67C	integrated Circuit	1
IC807	UPC78L12	Integrated Circuit	1
IC8101	AN6251	Integrated Circuit	1
IC8102	UPD4069C	integrated Circuit	1
IC8103	UPD4001C	integrated Circuit	1
IC8104	UPD4011C	integrated Circuit	1
IC8105	UPD4001C	integrated Circuit	1
IC8106	UPA67C	integrated Circuit	1
IC8107	UPD4001C	integrated Circuit	1
IC8108	UPD4069C	integrated Circuit	1
IC8109,8110	UPD4011C	integrated Circuit	2
IC8111	UPD4011C	integrated Circuit	1
IC8112	UPD4001C	integrated Circuit	1
IC8113	UPD4011C	integrated Circuit	1
IC8121	UPD78L12	Integrated Circuit	1

INTEGRATED CIRCUITS (RECORD PLAYER)

IC641	UPD4011C	Integrated Circuit	1
IC642	UPD4001C	Integrated Circuit	1
IC643,644	UPD4011C	Integrated Circuit	2
IC645	UPD4011C	Integrated Circuit	1

DIODES AND THERMISTOR

D1~4 S	SM112	Rectifier	4
D5 S	S10VB20T	Rectifier	1
D6 S	SM112	Rectifier	1
D101,102	SLP114B-11	Light Emitting	2
D103,104	SLP114B-11	Light Emitting	2
D105,106	SLP114B-11	Light Emitting	2
D107	SLP114B-11	Light Emitting	1
D108,109	MA150	Diode	2
D110,111	MA150	Diode	2
D112,113	MA150	Diode	2
D114,115	MA150	Diode	2
D116,117	MA150	Diode	2
D118,119	MA150	Diode	2
D120,121	MA150	Diode	2
D201	2OA90	Diode	1
D202	VD1121	Diode	1
D203	MA150	Diode	1
D204	VD1160M	Diode	1
D205,206	2OA90	Diode	2
D207,208	MA150	Diode	2
D210,211	1S2222	Diode	2
D212,213	1S2222	Diode	2
D213,215	1S2222	Diode	2
D216,217	MA150	Diode	2
D218,219	MA150	Diode	2
D220	MA150	Diode	1
D301	SLP114B-11	Light Emitting	1
D302,303	MA150	Diode	2
D401,402	MA150	Diode	2
D403	MA150	Diode	1
D801,802	OA91	Diode	2
D803	RD4R3EB	Zener Diode	1
D804	VD1223	Diode	1
D805	MA150	Diode	1

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	Per Set (pcs.)
D806,807	MA150	Diode	2
D808,809	MA150	Diode	2
D810	MA150	Diode	1
D811	SLP614B-11	Light Emitting	1
D812	SLP114B-11	Light Emitting	1
D813	SLP614B-11	Light Emitting	1
D814	SLP214B-11	Light Emitting	1
D815	MA150	Diode	1
D816,817	2OA90	Diode	2
D818,819	2OA90	Diode	2
D820,821	2OA90	Diode	2
D822,823	MA150	Diode	2
D824,825	MA150	Diode	2
D826	MA150	Diode	1
D827	SLP114B-11	Light Emitting	1
D828	SLP614B-11	Light Emitting	1
D829	SLP114B-11	Light Emitting	1
D830,831	MA150	Diode	2
D832	MA150	Diode	1
D833	VD1121	Diode	1
D834	MA150	Diode	1
D835	SLP114B-11	Light Emitting	1
D836,837	SLP114B-11	Light Emitting	2
D838,839	SLP114B-11	Light Emitting	2
D840,841	SLP114B-11	Light Emitting	2
D842	MA150	Diode	1
D843	VD1121	Diode	1
D844,845	MA150	Diode	2
D846	MA150	Diode	1
D847,848	VD1121	Diode	2
D849,850	MA150	Diode	2
D851,852	MA150	Diode	2
D853	MA150	Diode	1
D854,855	2OA90	Diode	2
D856	MA150	Diode	1
D905,906	S2V20F	Diode	2
D907,908 S	SM112	Rectifier	2
D909	MA1200	Zener Diode	1
D910	MA1160	Zener Diode	1
D911,912 S	SM112	Rectifier	2
D913	MA1130	Zener Diode	1
D914	VD1121	Diode	1
D915	MA150	Diode	1
D916	MA1160	Zener Diode	1
D917	MA1068	Zener Diode	1
D918,919	MA150	Diode	2
D920	MA150	Diode	1
D8101,8102	MA150	Diode	2
D8103,8104	MA150	Diode	2
D8105,8106	MA150	Diode	2
D8107,8108	MA150	Diode	2
D8109,8110	MA150	Diode	2
D8111,8112	MA150	Diode	2
D8113,8114	MA150	Diode	2

Ref. No.	Part No.	Description	Per Set (pcs.)
D8115	SLP114B-11	Light Emitting	1
D8116,8117	SLP214B-11	Light Emitting	2
D8118,8119	SLP214B-11	Light Emitting	2
D8120,8121	SLP214B-11	Light Emitting	2
D8131	MA150	Diode	1
D8132,8133	MA150	Diode	2
D8134,8135	MA150	Diode	2
D8136,8137	MA150	Diode	2
D8138,8139	MA150	Diode	2
D8140,8141	MA150	Diode	2
D8142,8143	MA150	Diode	2
D8144,8145	MA150	Diode	2
D8146,8147	MA150	Diode	2
D8148,8149	MA150	Diode	2
D8150,8151	MA150	Diode	2
D8152,8153	MA150	Diode	2
D8154,8155	MA150	Diode	2
D8156,8157	MA150	Diode	2
D8158,8159	MA150	Diode	2
D8160,8161	MA150	Diode	2
D8162,8163	MA150	Diode	2
D8164,8165	MA150	Diode	2
D8171 S	SM112	Rectifier	1
D8172,8173	MA150	Diode	2
D8174,8175	MA150	Diode	2
D8176,8177	MA150	Diode	2
D8178,8179	MA150	Diode	2
D8180,8181 S	SM112	Rectifier	2
D8182	MA150	Diode	1
D8191	SM112	Rectifier	1
D8192,8193	1S1555	Diode	2
TH801,802	ERDT2FHK202S	Thermistor	2
TH811	25D29	Thermistor	1

DIODES (RECORD PLAYER)

Ref. No.	Part No.	Description	Per Set (pcs.)
D641,642	MA150	Diode	2
D643,644	MA150	Diode	2
D645	SM112	Rectifier	1
D646	LN28RP	Light Emitting	1
D647	MA150	Diode	1
D648	LN28RP	Light Emitting	1
D649	MA150	Diode	1
D650,651	RB5505S	Light Emitting	2
D652	MA150	Diode	1
D653	SM112	Rectifier	1
D654,655	MA150	Diode	

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	Per Set (pcs.)
METERS AND DIGITAL DISPLAY			
M1	SSM146	Meter	1
M2	SSM144	Meter	1
M3	SSM142	Meter	1
M4,5	SSM132	Meter	2
DP1	TLG4030	Digital Display	1
PI801	PS4001	Photointerrupter	1
LAMPS AND FUSES			
PL1,2	XAMR42X	Lamp	2
PL3,4	XAMR53X500	Lamp	2
PL5,6	XAMR53X500	Lamp	2
PL7	XAMR34X500-1	Lamp	1
F701,702 🅂	XBA2C40TR0	Fuse	2
F901 🅂	XBA2C31TR0	Fuse	1
F902,903 🅂	XBA2C63TR0	Fuse	2
COILS AND TRANSFORMERS			
L101	SLQV472-2Y	RFC Coil	1
L201,202	SLF6G36-O	Ferrite ANT	2
L203	SLA3M8-M	SW ANT Coil	1
L204	SLO3M6-M	SW OSC Coil	1
L205	SLO2M6-M	MW OSC Coil	1
L206	SLO1M8-M	LW OSC Coil	1
L207,208	SLQV472-4K	RFC Coil	2
L209	SLQV393-6K	RFC Coil	1
L210	RLQY10S-2	Trap Coil	1
L211	ELQ5A9	Trap Coil	1
L212	SLQX180-2	Phase Coil	1
L213,214	ELQ5A9	Trap Coil	2
L301,302	SLM9Z2-2K	Lowpass Filter	2
L401,402	SLQC752-2K	Coil	2
L403,404	SLQV393-4Y	Trap Coil	2
L801,802	SLM9Z4-2K	Lowpass Filter	2
L803,804	SLQU270-2K	Choke Coil	2
L805	SLO9Z10-K	OSC Coil	1
L901,902 🅂	SLQY35S-2S	Choke coil	2
L903	ELQ250A999	Choke Coil	1
L8101	SLQU270-2K	Choke Coil	1
T201	SLI2M104-K	IF Transformer	1
T202	SLI2M204-K	IF Transformer	1
T203	RLI2M402	IF Transformer	1
T204	SLI4D513-3	FM Detector Coil	1

Ref. No.	Part No.	Description	Per Set (pcs.)
T801	SLT6E2-D	Output Transformer	1
T901 🅂	SLT8K2-I	Power Transformer	1
CF201,202	SVFE107MLT	Ceramic Filter, FM	2
CF203	SVFE107MLT	Ceramic Filter, FM	1
CF204	SVFU455E2	Ceramic Filter, AM	1
COILS (RECORD PLAYER)			
L1	SLQU222-2Y	Coil	1
L641	SLQU523-2Y	Coil	1
TUNER			
	SSD5004	Tuner	1
COMPONENT COMBINATIONS			
Z201	EXAF203Z471	C.C.	1
Z901,902	EXRFS203ZS	C.C.	2
Z903,904	EXRFS203ZS	C.C.	2
SWITCHES			
S1 🅂	ESE3742	Voltage Selector	1
S2	SSH72	Power A	1
S3	SSS96	Speaker Selector A	1
S4,5,6	SSS28	Clock Dim, Etc.	3
S6	SSS28	Clock Dim, etc	1
S7	SSH72	Memory	1
S201,202	SSL34-1	AFC, Muting	2
S501,502	SSL34-1	Monitor, Loudness	2
S503	SSL34-1	Hi-Filler	1
S701,702	SSH218	Speaker Selector B	2
S801-1～5	SSH410	Dolby	1
S802,803	SSL38	Adjust, Etc.	2
S804	SSL40	Timer	1
S805	SSL38	Sleep	1
S806	SSL42	Timer, Function	1
S901-1～2 🅂	SSH70	Power B	1
ST1～12	ESD86022-1	Recording	1
SL1	SMQ2042	Planger	1
RL901	SSY4	Power Relay	1

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	Per Set (pcs.)
SWITCH (RECORD PLAYER)			
S641	SSL28-1	Speed Selector	1
VARIABLE RESISTORS			
VR101	EVMH1GA00B55	Preset	1
VR102	EVLS6AA00B54	Preset	1
VR103	EVLS6AA00B32	Preset	1
VR104	EVLS6AA00B14	Preset	1
VR106,107	SVV2	Preset	2
VR108,109	SVV2	Preset	2
VR110,111	SVV2	Preset	2
VR201,202	EVLS6AA00B54	Preset	2
VR203	EVLS6AA00B53	Preset	1
VR301	EVLS6AA00B13	Preset	1
VR302	EVTS6AA00B53	Preset	1
VR401,402	EVLS6AA00B24	Preset	2
VR403,404	EVLS6AA00B15	Preset	2
VR501,502	EWKH4A031A54	Bass	1
VR503,504	EWKH4A031A54	Treble	1
VR505,506	EWFMEA037A54	Volume	1
VR507	EVHFHA038G54	Balance	1
VR801	EVLS6AA00B13	Preset	1
VR802,803	EVLS6AA00B24	Preset	2
VR804,805	EVH6UA084B14	Recording	2
VR806	EVLS6AA00B54	Preset	1
VR807,808	EVLS6AA00B24	Preset	2
VR811	EVLS3AA00B52	Preset	1
VARIABLE RESISTORS (RECORD PLAYER)			
VR641,642	EVHL0AF25B53	Speed Adjust	2
VARIABLE CAPACITORS			
CT201,202	SCVCTY115D	Trimmer	2
CT203,204	SCVCTY115D	Trimmer	2
CT205,206	SCVCTY115D	Trimmer	2
CV201,202 203	SCVC638W112K	VC with Volume (VR105)	1

Ref. No.	Part No.	Description	Per Set (pcs.)
PACKINGS			
PA1	SPN3338	Carton Box	1
PA2	SPN3366	Pad	1
PA3	SPN3368	Pad	1
PA4	SPN3370	Pad	1
PA5	SPN3372	Pad	1
PA6	SPN3374	Pad	1
PA7	SPN3376	Pad	1
PA8	SNE212	Screw, Player Transit	1
PA9	SNW601	Washer, Player Transit	1
PA10	SJY9526	Spacer, Turntable	1
PA11	XEB92X63L05	Poly Cover	1
OTHERS			
1	SQX50008-1	Instruction Book	1
2	SPT1HCZNRAZ	Demonstration Tape	1
3	SJP2212	Speaker Cord	2
4	OL340	Silicone Oil (for Transistor and Power IC)	1
5	SZ0GM0380	Grease	1
6	AD1600	Adhesives	1
7	KF96H100KCS	Silicone Oil (for Lifter)	1
8	SJP9214	Plug Adapter (SG-6070/(GE))	1
SPEAKER SYSTEM			
	SB-515	Speaker System	2

REPLACEMENT PARTS LIST

Numbering System of Resistor

Type	Wattage	Tolerance	Value
Three Letters	One or Two Letters	Two or Three Letters	Three or Four Letters

Example:

E R D	2 5	T J	1 0 1

Resistor Type	Tolerance
ERD: Carbon Film	F: ±1%
ERC: Solid	J: ±5%
ERX: Metal Film	K: ±10%
ERG: Metal Oxide Film	
ERO: Hi Stability Metal Film	
ERF: Flameproof Wire-Wound Bath-Tube	
ERQ: Fuse Type Metal Film	

Ref. No.	Part No.	Description	Per Set (pcs.)
	RESISTORS		
R101,102	ERD25TJ155	1.5MΩ 1/4W	2
R103,104	ERD25TJ155	1.5MΩ 1/4W	2
R105,106	ERD25TJ155	1.5MΩ 1/4W	2
R107	ERD25TJ155	1.5MΩ 1/4W	1
R108,109	ERD25TJ475	4.7MΩ 1/4W	2
R110,111	ERD25TJ475	4.7MΩ 1/4W	2
R112,113	ERD25TJ475	4.7MΩ 1/4W	2
R114	ERD25TJ475	4.7MΩ 1/4W	1
R115	ERD25TJ473	47kΩ 1/4W	1
R116	ERD25TJ223	22kΩ 1/4W	1
R117,118	ERD25TJ103	10kΩ 1/4W	2
R119	ERD25TJ102	1kΩ 1/4W	1
R120	ERD25TJ474	470kΩ 1/4W	1
R121	ERD25TJ682	6.8kΩ 1/4W	1
R122	ERD25TJ224	220kΩ 1/4W	1
R123	ERD25TJ223	22kΩ 1/4W	1
R124	ERD25TJ153	15kΩ 1/4W	1
R125	ERD25TJ683	68kΩ 1/4W	1
R126,127	ERD25TJ684	680kΩ 1/4W	2
R128	ERD25TJ223	22kΩ 1/4W	1
R129	ERD25TJ151	150Ω 1/4W	1
R130	ERD25TJ102	1kΩ 1/4W	1
R131	ERD25TJ2R2	2.2Ω 1/4W	1
R132	ERD25TJ824	820kΩ 1/4W	1
R201	ERD25TJ224	220kΩ 1/4W	1
R202,203	ERD25TJ331	330Ω 1/4W	2
R204	ERD25TJ224	220kΩ 1/4W	1
R205,206	ERD25TJ331	330Ω 1/4W	2
R207	ERD25TJ221	220Ω 1/4W	1
R208	ERD25TJ102	1kΩ 1/4W	1
R209	ERD25TJ332	3.3kΩ 1/4W	1
R210	ERD25TJ472	4.7kΩ 1/4W	1
R211	ERD25TJ152	1.5kΩ 1/4W	1
R213	ERD25TJ332	3.3kΩ 1/4W	1
R214	ERD25TJ333	33kΩ 1/4W	1
R215	ERD25TJ224	220kΩ 1/4W	1
R216	ERD25TJ682	6.8kΩ 1/4W	1
R217	ERD25TJ332	3.3kΩ 1/4W	1
R218	ERD25TJ472	4.7kΩ 1/4W	1
R219	ERD25TJ224	220kΩ 1/4W	1
R220	ERD25TJ223	22kΩ 1/4W	1
R221	ERD25TJ102	1kΩ 1/4W	1
R222	ERD25TJ104	100kΩ 1/4W	1
R223	ERD25TJ222	2.2kΩ 1/4W	1
R224	ERD25TJ220	22Ω 1/4W	1
R225	ERD25TJ331	330Ω 1/4W	1
R226	ERD25TJ223	22kΩ 1/4W	1
R227	ERD25TJ224	220kΩ 1/4W	1
R228	ERD25TJ683	68kΩ 1/4W	1
R229	ERD25TJ104	100kΩ 1/4W	1
R230	ERD25TJ331	330Ω 1/4W	1
R231	ERD25TJ332	3.3kΩ 1/4W	1
R232	ERD25TJ221	220Ω 1/4W	1
R233	ERD25TJ220	22Ω 1/4W	1
R234	ERD25TJ472	4.7kΩ 1/4W	1
R235	ERD25TJ103	10kΩ 1/4W	1
R236	ERD25TJ473	47kΩ 1/4W	1
R237	ERD25TJ103	10kΩ 1/4W	1
R238	ERD25TJ822	8.2kΩ 1/4W	1
R239	ERD25TJ331	330Ω 1/4W	1
R240,241	ERD25TJ222	2.2kΩ 1/4W	2
R242	ERD25TJ223	22kΩ 1/4W	1
R243	ERD25TJ103	10kΩ 1/4W	1
R244	ERD25TJ152	1.5kΩ 1/4W	1
R245	ERD25TJ101	100Ω 1/4W	1
R246	ERD25TJ222	2.2kΩ 1/4W	1
R247	ERD25TJ223	22kΩ 1/4W	1
R248	ERD25TJ103	10kΩ 1/4W	1
R249	ERD25TJ152	1.5kΩ 1/4W	1
R250	ERD25TJ101	100Ω 1/4W	1
R251	ERD25TJ330	33Ω 1/4W	1
R252	ERD25TJ222	2.2kΩ 1/4W	1
R253	ERD25TJ223	22kΩ 1/4W	1
R254	ERD25TJ103	10kΩ 1/4W	1
R255	ERD25TJ222	2.2kΩ 1/4W	1
R256	ERD25TJ152	1.5kΩ 1/4W	1
R257	ERD25TJ101	100Ω 1/4W	1
R258	ERD25TJ680	68Ω 1/4W	1
R259	ERD25TJ222	2.2kΩ 1/4W	1
R260	ERD25TJ223	22kΩ 1/4W	1
R261	ERD25TJ473	47kΩ 1/4W	1
R262	ERD25TJ103	10kΩ 1/4W	1
R263	ERD25TJ682	6.8kΩ 1/4W	1
R264	ERD25TJ473	43kΩ 1/4W	1
R265	ERD25TJ683	68kΩ 1/4W	1
R302	ERD25TJ101	100Ω 1/4W	1
R303	ERD25TJ682	6.8kΩ 1/4W	1

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description		Per Set (pcs.)
R304	ERD25TJ332	3.3kΩ	1/4W	1
R305	ERD25TJ103	10kΩ	1/4W	1
R306,307	ERD25TJ473	47kΩ	1/4W	2
R308	ERD25TJ473	47kΩ	1/4W	1
R309	ERD25TJ681	680Ω	1/4W	1
R310,311	ERD25TJ222	2.2kΩ	1/4W	2
R312,313	ERD25TJ332	3.3kΩ	1/4W	2
R314,315	ERD25TJ683	6.8kΩ	1/4W	2
R316	ERD25TJ102	1kΩ	1/4W	1
R317	ERD25TJ473	47kΩ	1/4W	1
R401,402	ERD25TJ100	10Ω	1/4W	2
R403,404	ERD25TJ823	82kΩ	1/4W	2
R405,406	ERD25TJ473	47kΩ	1/4W	2
R407,408	ERD25TJ101	100Ω	1/4W	2
R409,410	ERD25TJ224	220kΩ	1/4W	2
R411	ERD25TJ333	33kΩ	1/4W	1
R412	ERD25TJ223	22kΩ	1/4W	1
R413,414	ERD25TJ103	10kΩ	1/4W	2
R415,416	ERD25TJ102	1kΩ	1/4W	2
R417,418	ERD25TJ224	220kΩ	1/4W	2
R419,420	ERD25TJ682	6.8kΩ	1/4W	2
R421,422	ERD25TJ822	8.2kΩ	1/4W	2
R423	ERD25TJ331	330Ω	1/4W	1
R424	ERD25TJ102	1kΩ	1/4W	1
R425,426	ERD25TJ103	10kΩ	1/4W	2
R427	ERD25TJ103	10kΩ	1/4W	1
R428,429	ERD25TJ332	3.3kΩ	1/4W	2
R430,431	ERD25TJ334	330kΩ	1/4W	2
R432,433	ERD25TJ104	100kΩ	1/4W	2
R434,435	ERD25TJ334	330kΩ	1/4W	2
R436,437	ERD25TJ682	6.8kΩ	1/4W	2
R438,439	ERD25TJ152	1.5kΩ	1/4W	2
R440,441	ERD25TJ152	1.5kΩ	1/4W	2
R442,443	ERD25TJ332	3.3kΩ	1/4W	2
R444	ERD25TJ103	10kΩ	1/4W	1
R445	ERD25TJ102	1kΩ	1/4W	1
R446,447	ERD25TJ103	10kΩ	1/4W	2
R448,449	ERD25TJ103	10kΩ	1/4W	2
R450	ERD25TJ103	10kΩ	1/4W	1
R451,452	ERD25TJ681	680Ω	1/4W	2
R453,454	ERD25TJ332	3.3kΩ	1/4W	2
R455,456	ERD25TJ334	330Ω	1/4W	2
R457,458	ERD25TJ222	2.2kΩ	1/4W	2
R459,460	ERD25TJ152	1.5kΩ	1/4W	2
R461,462	ERD25TJ820	82Ω	1/4W	2
R463,464	ERD25TJ153	15kΩ	1/4W	2
R465,466	ERD25TJ332	3.3kΩ	1/4W	2
R467,468	ERD25TJ155	1.5MΩ	1/4W	2
R469,470	ERD25TJ682	6.8kΩ	1/4W	2
R471,472	ERD25TJ331	330Ω	1/4W	2
R473,474	ERD25TJ473	47kΩ	1/4W	2
R475	ERD25TJ102	1kΩ	1/4W	1
R501,502	ERD25TJ104	100kΩ	1/4W	2

Ref. No.	Part No.	Description		Per Set (pcs.)
R503,504	ERD25TJ103	10kΩ	1/4W	2
R505,506	ERD25TJ155	1.5MΩ	1/4W	2
R507,508	ERD25TJ103	10kΩ	1/4W	2
R509,510	ERD25TJ473	47kΩ	1/4W	2
R511,512	ERD25TJ473	47kΩ	1/4W	2
R513,514	ERD25TJ104	100kΩ	1/4W	2
R515,516	ERD25TJ684	680kΩ	1/4W	2
R517,518	ERD25TJ472	4.7kΩ	1/4W	2
R519,520	ERD25TJ473	47kΩ	1/4W	2
R521,522	ERD25TJ683	68kΩ	1/4W	2
R523,524	ERD25TJ333	33kΩ	1/4W	2
R525,526	ERD25TJ683	68kΩ	1/4W	2
R527,528	ERD25TJ682	6.8kΩ	1/4W	2
R529,530	ERD25TJ332	3.3kΩ	1/4W	2
R531,532	ERD25TJ224	220kΩ	1/4W	2
R533,534	ERD25TJ155	1.5MΩ	1/4W	2
R535,536	ERD25TJ471	470Ω	1/4W	2
R537,538	ERD25TJ472	4.7kΩ	1/4W	2
R539,540	ERD25TJ473	47kΩ	1/4W	2
R541	ERD25TJ102	1kΩ	1/4W	1
R542	ERD25TJ224	220kΩ	1/4W	2
R543,544	ERD25TJ333	33kΩ	1/4W	2
R545	ERD25TJ153	15kΩ	1/4W	1
R546,547	ERD25TJ101	100Ω	1/4W	2
R548	ERD25TJ223	22kΩ	1/4W	1
R551,552	ERD25TJ223	22kΩ	1/4W	2
R553,554	ERD25TJ104	100kΩ	1/4W	2
R555,556	ERD25TJ222	2.2kΩ	1/4W	2
R557,558	ERD25TJ472	4.7kΩ	1/4W	2
R559,560	ERD25TJ105	1MΩ	1/4W	2
R561,562	ERD25TJ682	6.8kΩ	1/4W	2
R563,564	ERD25TJ684	680kΩ	1/4W	2
R565,566	ERD25TJ224	220kΩ	1/4W	2
R567,568	ERD25TJ223	22kΩ	1/4W	2
R569,570	ERD25TJ102	1kΩ	1/4W	2
R571,572	ERD25TJ152	1.5kΩ	1/4W	2
R573,574	ERD25TJ682	6.8kΩ	1/4W	2
R575,576	ERD25TJ333	33kΩ	1/4W	2
R577,578	ERD25TJ102	1kΩ	1/4W	2
R579	ERD25TJ103	10kΩ	1/4W	1
R580	ERD25TJ222	2.2kΩ	1/4W	1
R581,582	ERD25TJ103	10kΩ	1/4W	2
R601,602	ERD25TJ102	1kΩ	1/4W	2
R603,604	ERD25TJ154	150kΩ	1/4W	2
R605,606	ERD25TJ471	470Ω	1/4W	2
R607,608	ERD25TJ104	100kΩ	1/4W	2
R609,610	ERD25TJ103	10kΩ	1/4W	2
R611,612	ERD25TJ102	1kΩ	1/4W	2
R613,614	ERD25TJ823	82kΩ	1/4W	2
R615,616	ERD25TJ682	6.8kΩ	1/4W	2
R617,618	ERD25TJ223	22kΩ	1/4W	2
R619,620	ERD25TJ223	22kΩ	1/4W	2
R621	ERD25TJ333	33kΩ	1/4W	1

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description		Per Set (pcs.)
R622	ERD25TJ102	1kΩ	1/4W	1
R701,702	ERD25TJ684	680kΩ	1/4W	2
R703,704	ERD25TJ224	220kΩ	1/4W	2
R705,706	ERD25TJ103	10kΩ	1/4W	2
R707,708	ERD25TJ681	680Ω	1/4W	2
R709,710	ERD25TJ222	2.2kΩ	1/4W	2
R711,712	ERD25TJ473	47kΩ	1/4W	2
R713,714	ERD25TJ563	56kΩ	1/4W	2
R715,716	ERD25TJ122	1.2kΩ	1/4W	2
R717,718	ERD25TJ563	56kΩ	1/4W	2
R725,726	ERD25TJ330	33Ω	1/4W	2
R727	ERD25TJ222	2.2kΩ	1/4W	1
R801,802	ERD25TJ105	1MΩ	1/4W	2
R803,804	ERD25TJ334	330kΩ	1/4W	2
R805,806	ERD25TJ102	1kΩ	1/4W	2
R809,810	ERD25TJ181	180Ω	1/4W	2
R811,812	ERD25TJ473	47Ω	1/4W	2
R813,814	ERD25TJ104	100kΩ	1/4W	2
R815,816	ERD25TJ181	180Ω	1/4W	2
R817,818	ERD25TJ154	150kΩ	1/4W	2
R819,820	ERD25TJ684	680kΩ	1/4W	2
R821,822	ERD25TJ274	270kΩ	1/4W	2
R823	ERD25TJ332	3.3kΩ	1/4W	1
R824	ERD25TJ103	10kΩ	1/4W	1
R825	ERD25TJ182	1.8kΩ	1/4W	1
R826	ERD25TJ682	6.8kΩ	1/4W	1
R827,828	ERD25TJ222	2.2kΩ	1/4W	2
R829,830	ERD25TJ471	470Ω	1/4W	2
R831	ERD25TJ101	100Ω	1/4W	1
R832	ERD25TJ222	2.2kΩ	1/4W	1
R833	ERD25TJ220	22Ω	1/4W	1
R834	ERD25TJ473	47kΩ	1/4W	1
R835	ERD25TJ222	2.2kΩ	1/4W	1
R836	ERD25TJ473	47kΩ	1/4W	1
R837	ERD25TJ222	2.2kΩ	1/4W	1
R838,839	ERD25TJ681	680Ω	1/4W	2
R840,841	ERD25TJ681	680Ω	1/4W	2
R842	ERD25TJ101	100Ω	1/4W	1
R843	ERD25TJ221	220Ω	1/4W	1
R844	ERD25TJ331	330Ω	1/4W	1
R845,846	ERD25TJ152	1.5kΩ	1/4W	2
R847,848	ERD25TJ334	330kΩ	1/4W	2
R849,850	ERD25TJ471	470Ω	1/4W	2
R853,854	ERD25TJ683	68kΩ	1/4W	2
R855,856	ERD25TJ222	2.2kΩ	1/4W	2
R857	ERD25TJ333	33kΩ	1/4W	1
R858	ERD25TJ153	15kΩ	1/4W	1
R859	ERD25TJ223	22kΩ	1/4W	1
R860,861	ERD25TJ102	1kΩ	1/4W	2
R862	ERD25TJ103	10kΩ	1/4W	1
R863	ERD25TJ104	100kΩ	1/4W	1
R865	ERD25TJ474	470kΩ	1/4W	1
R867	ERD25TJ103	10kΩ	1/4W	1
R868	ERD25TJ474	470kΩ	1/4W	1
R869,870	ERD25TJ103	10kΩ	1/4W	2
R871	ERD25TJ105	1MΩ	1/4W	1
R872	ERD25TJ474	470kΩ	1/4W	1
R873	ERD25TJ2R7	2.7Ω	1/4W	1
R874	ERD25TJ122	1.2kΩ	1/4W	1
R875	ERD25TJ470	47Ω	1/4W	1
R876	ERD25TJ392	3.9kΩ	1/4W	1
R877	ERD25TJ562	5.6kΩ	1/4W	1
R878	ERD25TJ103	10kΩ	1/4W	1
R879	ERD25TJ222	2.2kΩ	1/4W	1
R880,881	ERD25TJ223	22kΩ	1/4W	2
R882,883	ERD25TJ472	4.7kΩ	1/4W	2
R884,885	ERD25TJ682	6.8kΩ	1/4W	2
R886,887	ERD25TJ223	22kΩ	1/4W	2
R888,889	ERD25TJ104	100kΩ	1/4W	2
R890,891	ERD25TJ104	100kΩ	1/4W	2
R892,893	ERD25TJ104	100kΩ	1/4W	2
R894	ERD25TJ224	220kΩ	1/4W	1
R895	ERD25TJ223	22kΩ	1/4W	1
R896	ERD25TJ4R7	4.7Ω	1/4W	1
R897	ERD25TJ103	10kΩ	1/4W	1
R898	ERD25TJ223	22kΩ	1/4W	1
R901	ERD25TJ332	3.3kΩ	1/4W	1
R903,904	ERD25TJ222	2.2kΩ	1/4W	2
R905,906	ERD25TJ221	220Ω	1/4W	2
R907	ERD25TJ222	2.2kΩ	1/4W	1
R909	ERD25TJ102	1kΩ	1/4W	1
R910	ERD25TJ222	2.2kΩ	1/4W	1
R911	ERD25TJ221	220Ω	1/4W	1
R912	ERD25TJ222	2.2kΩ	1/4W	1
R913	ERD25TJ221	220Ω	1/4W	1
R919	ERD25TJ332	3.3kΩ	1/4W	1
R920,921	ERD25TJ221	220Ω	1/4W	2
R926	ERD25TJ103	10kΩ	1/4W	1
R927	ERD25TJ153	15kΩ	1/4W	1
R928	ERD25TJ222	2.2kΩ	1/4W	1
R929	ERD25TJ472	4.7kΩ	1/4W	1
R931	ERD25TJ332	3.3kΩ	1/4W	1
R932	ERD25TJ221	220Ω	1/4W	1
R933	ERD25TJ101	100Ω	1/4W	1
R935	ERD25TJ332	3.3kΩ	1/4W	1
R936	ERD25TJ221	220Ω	1/4W	1
R937	ERD25TJ101	100Ω	1/4W	1
R938	ERD25TJ822	8.2kΩ	1/4W	1
R939	ERD25TJ682	6.8kΩ	1/4W	1
R8001	ERD25TJ155	1.5MΩ	1/4W	1
R8002,8003	ERD25TJ155	1.5MΩ	1/4W	2
R8004,8005	ERD25TJ155	1.5MΩ	1/4W	2
R8006,8007	ERD25TJ155	1.5MΩ	1/4W	2
R8008	ERD25TJ155	1.5MΩ	1/4W	1
R8009	ERD25TJ155	1.5MΩ	1/4W	1
R8010,8011	ERD25TJ475	4.7MΩ	1/4W	2

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description		Per Set (pcs.)
R8012	ERD25TJ475	4.7MΩ	1/4W	1
R8013	ERD25TJ155	1.5MΩ	1/4W	1
R8014,8015	ERD25TJ475	4.7MΩ	1/4W	2
R8016,8017	ERD25TJ475	4.7MΩ	1/4W	2
R8018	ERD25TJ104	100kΩ	1/4W	1
R8019	ERD25TJ152	1.5kΩ	1/4W	1
R8020	ERD25TJ103	10kΩ	1/4W	1
R8021	ERD25TJ912	9.1kΩ	1/4W	1
R8022	ERD25TJ123	1.2kΩ	1/4W	1
R8023	ERD25TJ151	150Ω	1/4W	1
R8024	ERD25TJ223	22kΩ	1/4W	1
R8025	ERD25TJ333	33kΩ	1/4W	1
R8026,8027	ERD25TJ223	22kΩ	1/4W	2
R8028	ERD25TJ333	33kΩ	1/4W	1
R8029	ERD25TJ223	22kΩ	1/4W	1
R8030	ERD25TJ222	2.2kΩ	1/4W	1
R8032	ERD25TJ683	68kΩ	1/4W	1
R8033	ERD25TJ223	22kΩ	1/4W	1
R8034	ERD25TJ332	3.3kΩ	1/4W	1
R8035	ERD25TJ222	2.2kΩ	1/4W	1
R8036,8037	ERD25TJ223	22kΩ	1/4W	2
R8038,8039	ERD25TJ223	22kΩ	1/4W	2
R8040,8041	ERD25TJ223	22kΩ	1/4W	2
R8042,8043	ERD25TJ223	22kΩ	1/4W	2
R8044	ERD25TJ103	10Ω	1/4W	1
R8045	ERD25TJ472	4.7kΩ	1/4W	1
R8046	ERD25TJ223	22kΩ	1/4W	1
R8047	ERD25TJ103	10kΩ	1/4W	1
R8048	ERD25TJ473	47kΩ	1/4W	1
R8049	ERD25TJ333	33kΩ	1/4W	1
R8050	ERD25TJ223	22kΩ	1/4W	1
R8051	ERD25TJ332	3.3kΩ	1/4W	1
R8052	ERD25TJ471	470Ω	1/4W	1
R8053	ERD25TJ104	100kΩ	1/4W	1
R8054	ERD25TJ224	220kΩ	1/4W	1
R8055	ERD25TJ102	1kΩ	1/4W	1
R8056	ERD25TJ103	10kΩ	1/4W	1
R8057	ERD25TJ333	33kΩ	1/4W	1
R8058	ERD25TJ223	22kΩ	1/4W	1
R8059	ERD25TJ473	47kΩ	1/4W	1
R8060	ERD25TJ103	10kΩ	1/4W	1
R8061,8062	ERD25TJ473	47kΩ	1/4W	2
R8063	ERD25TJ222	2.2kΩ	1/4W	1
R8064	ERD25TJ102	1kΩ	1/4W	1
R8065	ERD25TJ333	33kΩ	1/4W	1
R8066	ERD25TJ223	22kΩ	1/4W	1
R8067	ERD25TJ222	2.2kΩ	1/4W	1
R8068	ERD25TJ683	68kΩ	1/4W	1
R8070	ERD25TJ104	100kΩ	1/4W	1
R8101	ERD25TJ155	1.5MΩ	1/4W	1
R8102,8103	ERD25TJ103	10kΩ	1/4W	2
R8104	ERD25TJ472	4.7kΩ	1/4W	1
R8105	ERD25TJ224	220kΩ	1/4W	1
R8106	ERD25TJ155	1.5MΩ	1/4W	1
R8107,8108	ERD25TJ103	10kΩ	1/4W	2
R8109	ERD25TJ472	4.7kΩ	1/4W	1
R8110	ERD25TJ224	220kΩ	1/4W	1
R8111	ERD25TJ155	1.5MΩ	1/4W	1
R8112,8113	ERD25TJ103	10kΩ	1/4W	2
R8114	ERD25TJ472	4.7kΩ	1/4W	1
R8115	ERD25TJ224	220kΩ	1/4W	1
R8116	ERD25TJ155	1.5MΩ	1/4W	1
R8117,8118	ERD25TJ103	10kΩ	1/4W	2
R8119	ERD25TJ472	4.7kΩ	1/4W	1
R8120	ERD25TJ224	220kΩ	1/4W	1
R8121	ERD25TJ155	1.5MΩ	1/4W	1
R8122,8123	ERD25TJ103	10kΩ	1/4W	2
R8124	ERD25TJ472	4.7kΩ	1/4W	1
R8125	ERD25TJ224	220kΩ	1/4W	1
R8126	ERD25TJ155	1.5MΩ	1/4W	1
R8127,8128	ERD25TJ103	10kΩ	1/4W	1
R8129	ERD25TJ472	4.7kΩ	1/4W	1
R8130	ERD25TJ224	220kΩ	1/4W	1
R8131	ERD25TJ155	1.5MΩ	1/4W	1
R8132,8133	ERD25TJ103	10kΩ	1/4W	2
R8134	ERD25TJ472	4.7kΩ	1/4W	1
R8135	ERD25TJ224	220kΩ	1/4W	1
R8136,8137	ERD25TJ122	1.2kΩ	1/4W	2
R8141,8142	ERD25TJ333	33kΩ	1/4W	2
R8143	ERD25TJ473	47kΩ	1/4W	1
R8144,8145	ERD25TJ333	33kΩ	1/4W	2
R8146,8147	ERD25TJ333	33kΩ	1/4W	2
R8148,8149	ERD25TJ333	33kΩ	1/4W	2
R8150	ERD25TJ102	1kΩ	1/4W	1
R8151	ERD25TJ122	1.2kΩ	1/4W	1
R8152,8153	ERD25TJ223	22kΩ	1/4W	2
R8154	ERD25TJ472	4.7kΩ	1/4W	1
R8155	ERD25TJ223	22kΩ	1/4W	1
R8156	ERD25TJ224	220kΩ	1/4W	1
R8157	ERD25TJ223	22kΩ	1/4W	1
R8158	ERD25TJ472	4.7kΩ	1/4W	1
R8159,8160	ERD25TJ223	22kΩ	1/4W	2
R8161	ERD25TJ223	22kΩ	1/4W	1
R8162	ERD25TJ334	330kΩ	1/4W	1
R8163,8164	ERD25TJ223	22kΩ	1/4W	2
R8165,8166	ERD25TJ223	22kΩ	1/4W	2
R8167	ERD25TJ223	22kΩ	1/4W	1
R8168	ERD25TJ472	4.7kΩ	1/4W	1
R8169,8170	ERD25TJ223	22kΩ	1/4W	2
R8171	ERD25TJ472	4.7kΩ	1/4W	1
R8172,8173	ERD25TJ223	22kΩ	1/4W	2
R8174	ERD25TJ472	4.7kΩ	1/4W	1
R8175,8176	ERD25TJ223	22kΩ	1/4W	2
R8177	ERD25TJ472	4.7kΩ	1/4W	1
R8178	ERD25TJ223	22kΩ	1/4W	1
R8179	ERD25TJ472	4.7kΩ	1/4W	1
R8180	ERD25TJ104	100kΩ	1/4W	1
R8181,8182	ERD25TJ683	68kΩ	1/4W	2

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description		Per Set (pcs.)
R8183,8184	ERD25TJ333	33kΩ	1/4W	2
R8185	ERD25TJ333	33kΩ	1/4W	1
R8186	ERD25TJ223	22kΩ	1/4W	1
R8187,8188	ERD25TJ333	33kΩ	1/4W	2
R8189	ERD25TJ333	33kΩ	1/4W	1
R8190	ERD25TJ103	10kΩ	1/4W	1
R8191	ERD25TJ333	33kΩ	1/4W	1
R8192	ERD25TJ104	100kΩ	1/4W	1
R8193	ERD25TJ333	33kΩ	1/4W	1
R8194	ERD25TJ683	68kΩ	1/4W	1
R8195,8196	ERD25TJ223	22kΩ	1/4W	2
R8197,8198	ERD25TJ683	68kΩ	1/4W	2
R8199,8200	ERD25TJ103	10kΩ	1/4W	2
R8201	ERD25TJ103	10kΩ	1/4W	1
R8202	ERD25TJ104	100kΩ	1/4W	1
R8203	ERD25TJ333	33kΩ	1/4W	1
R8204	ERD25TJ472	4.7kΩ	1/4W	1
R8205	ERD25TJ223	22kΩ	1/4W	1
R8206	ERD25TJ333	33kΩ	1/4W	1
R8207	ERD25TJ102	1kΩ	1/4W	1
R8208	ERD25TJ103	10kΩ	1/4W	1
R8209	ERD25TJ333	33kΩ	1/4W	1
R8210	ERD25TJ103	10kΩ	1/4W	1
R8211	ERD25TJ104	100kΩ	1/4W	1
R8212	ERD25TJ333	33kΩ	1/4W	1
R8213	ERD25TJ473	4.7kΩ	1/4W	1
R8214	ERD25TJ103	10kΩ	1/4W	1
R8215,8216	ERD25TJ334	330kΩ	1/4W	2
R8217,8218	ERD25TJ473	47kΩ	1/4W	2
R8219,8220	ERD25TJ473	47kΩ	1/4W	2
R8221	ERD25TJ473	47kΩ	1/4W	1
R8222,8223	ERD25TJ474	470kΩ	1/4W	2
R8224	ERD25TJ223	22kΩ	1/4W	1
R8225	ERD25TJ104	100kΩ	1/4W	1
R8226	ERD25TJ103	10kΩ	1/4W	1
R8227,8228	ERD25TJ223	22kΩ	1/4W	2
R8229	ERD25TJ224	220kΩ	1/4W	1
R8230	ERD25TJ103	10kΩ	1/4W	1
R8231	ERD25TJ233	23kΩ	1/4W	1
R8232	ERD25TJ474	470kΩ	1/4W	1
R8233	ERD25TJ152	1.5kΩ	1/4W	1
R8234	ERD25TJ224	220kΩ	1/4W	1
R8235	ERD25TJ333	33kΩ	1/4W	1
R8236	ERD25TJ102	1kΩ	1/4W	1
R8237	ERD25TJ103	10kΩ	1/4W	1
R8238	ERD25TJ152	1.5kΩ	1/4W	1
R8239	ERD25TJ224	220kΩ	1/4W	1
R8240	ERD25TJ473	47kΩ	1/4W	1
R8241	ERD25TJ223	22kΩ	1/4W	1
R8242	ERD25TJ473	47kΩ	1/4W	1
R8243	ERD25TJ103	10kΩ	1/4W	1
R8244,8245	ERD25TJ333	33kΩ	1/4W	2
R8246	ERD25TJ102	1kΩ	1/4W	1
R8247,8248	ERD25TJ333	33kΩ	1/4W	2

Ref. No.	Part No.	Description		Per Set (pcs.)
R8249	ERD25TJ333	33kΩ	1/4W	1
R8251	ERD25TJ473	47kΩ	1/4W	1
R8252	ERD25TJ221	220Ω	1/4W	1
R8253	ERD25TJ472	4.7kΩ	1/4W	1
R8254	ERD25TJ103	10kΩ	1/4W	1
R8255	ERD25TJ473	47kΩ	1/4W	1
R8256	ERD25TJ221	220kΩ	1/4W	1
R8257	ERD25TJ472	4.7kΩ	1/4W	1
R8258	ERD25TJ103	10kΩ	1/4W	1
R8259	ERD25TJ223	22kΩ	1/4W	1
R8261	ERD25TJ472	4.7kΩ	1/4W	1
R8262	ERD25TJ103	10kΩ	1/4W	1
R8263,8264	ERD25TJ473	47kΩ	1/4W	2
R8265	ERD25TJ473	47kΩ	1/4W	1
R8266	ERD25TJ102	1kΩ	1/4W	1
R8267	ERD25TJ103	10kΩ	1/4W	1
R8268	ERD25TJ332	3.3kΩ	1/4W	1
R8270	ERD25TJ473	47kΩ	1/4W	1
R8271	ERD25TJ333	33kΩ	1/4W	1
R8273	ERD25TJ474	470kΩ	1/4W	1
R8274	ERD25TJ104	100kΩ	1/4W	1
R8275	ERD25TJ223	22kΩ	1/4W	1
R8276	ERD25TJ473	47kΩ	1/4W	1
R8277	ERD25TJ103	10kΩ	1/4W	1
R8278	ERD25TJ223	22kΩ	1/4W	1
R8279	ERD25TJ681	680Ω	1/4W	1
R8280	ERD25TJ682	6.8kΩ	1/4W	1
R8281	ERD25TJ472	4.7kΩ	1/4W	1
R8282	ERD25TJ224	220kΩ	1/4W	1
R8283	ERD25TJ473	47kΩ	1/4W	1
R8284	ERD25TJ104	100kΩ	1/4W	1
R8285,8286	ERD25TJ332	3.3kΩ	1/4W	2
R8287	ERD25TJ222	2.2kΩ	1/4W	1
R8293	ERD25TJ102	1kΩ	1/4W	1
R8295	ERD25TJ681	680Ω	1/4W	1
R8296	ERD25TJ473	47kΩ	1/4W	1
R8297	ERD25TJ223	22kΩ	1/4W	1
R8301	ERD25TJ680	68Ω	1/4W	1
R8302	ERD25TJ152	1.5kΩ	1/4W	1
R8303	ERD25TJ122	1.2kΩ	1/4W	1
R8304	ERD25TJ471	470Ω	1/4W	1
R8308	ERD25TJ102	1kΩ	1/4W	1
R8309	ERD25TJ471	470Ω	1/4W	1
R8310	ERD25TJ100	10Ω	1/4W	1
R8311	ERD25TJ471	470Ω	1/4W	1
R8269	ERD18FJ101	100Ω	1/8W	1
R8288	ERD18FJ101	100Ω	1/8W	1
R301 S	ERG1ANJ221	220Ω	1W	1
R719,720 S	ERG1ANJ220	22Ω	1W	2
R723,724 S	ERG1ANJ221	220Ω	1W	2
R915,916 S	ERG1ANJ220	22Ω	1W	2

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description		Per Set (pcs.)
R917 S	ERG1ANJ102	1kΩ	1W	1
R8260 S	ERG1ANJ151	150Ω	1W	1
R8272 S	ERG1ANJ681	680Ω	1W	1
R8289 S	ERG1ANJ681	680Ω	1W	1
R8306 S	ERX1ANJ3R9	3.9Ω	1W	1
R8307 S	ERX1ANJ181	180Ω	1W	1
R8260 S	ERG1ANJ151	150Ω	1W	1
R8272 S	ERG1ANJ681	680Ω	1W	1
R8289 S	ERG1ANJ681	680Ω	1W	1
R4 S	ERQ3CJ1R0	1Ω	3W	1
R5 S	ERQ3CJ470	47Ω	3W	1
R902 S	ERQ3CJ1R0	1Ω	3W	1
R721,722 S	ERQ12HJ101	100Ω	1/2W	2
R914 S	ERQ12HJ470	47Ω	1/2W	1
R923 S	ERQ12HJ220	22Ω	1/2W	1
R924,925 S	ERQ12HJ470	47Ω	1/2W	2
R930 S	ERQ12HJ470	47Ω	1/2W	1
R934 S	ERQ12HJ4R7	4.7Ω	1/2W	1
R807,808 S	ERO25CKF3301	3.3kΩ	1/4W	2
R8294 S	ERF7ZJ390	39Ω	7W	1
R1 S	ERU10GMK8R2	8.2Ω	10W	1
R8305	1320-10-10	4.4Ω	1/2W	1
RESISTORS (RECORD PLAYER)				
R641,642	ERD25TJ155	1.5MΩ	1/4W	2
R643,644	ERD25TJ103	10kΩ	1/4W	2
R645,646	ERD25TJ103	10kΩ	1/4W	2
R647,648	ERD25TJ472	4.7kΩ	1/4W	2
R649,650	ERD25TJ102	1kΩ	1/4W	2
R651,652	ERD25TJ104	100kΩ	1/4W	2
R653	ERD25TJ224	220kΩ	1/4W	1
R654	ERD25TJ104	100kΩ	1/4W	1
R655,656	ERD25TJ473	47kΩ	1/4W	2
R657,658	ERD25TJ472	4.7kΩ	1/4W	2
R660	ERD25TJ103	10kΩ	1/4W	1
R661	ERD25TJ104	100kΩ	1/4W	1
R663,664	ERD25TJ472	4.7kΩ	1/4W	2
R665	ERD25TJ473	47kΩ	1/4W	1
R667,668	ERD25TJ223	22kΩ	1/4W	2
R669	ERD25TJ471	470Ω	1/4W	1
R670	ERD25TJ104	100kΩ	1/4W	1
R671	ERD25TJ154	150kΩ	1/4W	1
R672	ERD25TJ222	2.2kΩ	1/4W	1
R673	ERD25TJ223	22kΩ	1/4W	1
R674	ERD25TJ102	1kΩ	1/4W	1
R675,676	ERD25TJ473	47kΩ	1/4W	2
R677,678	ERD25TJ102	1kΩ	1/4W	2
R679	ERD25TJ474	470kΩ	1/4W	1
R680,681	ERD25TJ683	68kΩ	1/4W	2
R682	ERD25TJ472	4.7kΩ	1/4W	1
R684	ERD25TJ561	560Ω	1/4W	1
R685	ERD25TJ103	10kΩ	1/4W	1
R686	ERD25TJ222	2.2kΩ	1/4W	1
R688	ERD25TJ680	68Ω	1/4W	1
R689	ERD25TJ102	1kΩ	1/4W	1
R690	ERD25TJ221	220Ω	1/4W	1
R691	ERD25TJ393	39kΩ	1/4W	1
R692	ERD25TJ333	33kΩ	1/4W	1
R693	ERD25TJ103	10kΩ	1/4W	1
R694	ERD25TJ102	1kΩ	1/4W	1
R695	ERD25TJ103	10kΩ	1/4W	1
R697	ERD25TJ152	1.5kΩ	1/4W	1
R698	ERD25TJ473	4.7kΩ	1/4W	1
R659 S	ERG1ANJ330	33Ω	1W	1
R696 S	ERG1ANJ100	10Ω	1W	1
R687 S	ERQ12HJ100	10Ω	1/2W	1

REPLACEMENT PARTS LIST

Numbering System of Capacitor

Type	Voltage	Value	Tolerance
Four Letters	One or Two Letters	Two to Five Letters	One or Two Letters

Example:

E C K D 1 H 3 3 3 M D

Capacitor Type	Tolerance
ECCD: Temperature Compensation Ceramic	C: ±0.25pF
ECKD: Hi Dielectric Constant Ceramic	D: ±0.5pF
ECQM: Polyester	F: ±1pF
ECQS: Polystyrene Film	J: ±5%
ECFD: Semiconductor Ceramic	K: ±10%
ECEA: Electrolytic	M: ±20%
ECEB: Electrolytic	P: +100, −0%
ECET: Electrolytic	
ECSF: Tantalum	

Ref. No.	Part No.	Description		Per Set (pcs.)
	CAPACITORS			
C205	ECCD1H050D	5pF	50V	1
C218	ECCD1H680K	68pF	50V	1
C226	ECCD1H680K	68pF	50V	1
C242	ECCD1H070D	7pF	50V	1
C246	ECCD1H070D	7pF	50V	1
C252	ECCD1H270K	27pF	50V	1
C256	ECCD1H680K	680pF	50V	1
C257	ECCD1H270K	27pF	50V	1
C261	ECCD1H180K	18pF	50V	1
C603,604	ECCD1H470K	47pF	50V	2
C713,714	ECCD1H020C	2pF	50V	2
C202	ECKD1H223ZF	0.022μF	50V	1
C203,204	ECKD1H103ZF	0.01μF	50V	2
C206,207	ECKD1H103ZF	0.01μF	50V	2
C210	ECKD1H103ZF	0.01μF	50V	1
C211	ECKD1H223ZF	0.022μF	50V	1
C213	ECKD1H223ZF	0.022μF	50V	1
C220	ECKD1H103ZF	0.01μF	50V	1
C228	ECKD1H103ZF	0.01μF	50V	1
C229	ECKD1H102KB	0.001μF	50V	1
C230,231	ECKD1H103ZF	0.01μF	50V	2
C232	ECKD1H103ZF	0.01μF	50V	1
C234	ECKD1H103ZF	0.01μF	50V	1
C237	ECKD1H223ZF	0.022μF	50V	1
C239	ECKD1H221KB	220μF	50V	1
C241	ECKD1H223ZF	0.022μF	50V	1
C262,263	ECKD1H223ZF	0.022μF	50V	2
C405,406	ECKD1H102KB	0.001μF	50V	2
C446,447	ECKD1H102KB	0.001μF	50V	2
C503,504	ECKD1H102KB	0.001μF	50V	2
C509,510	ECKD1H102KB	0.001μF	50V	2
C517,518	ECKD1H102KB	0.001μF	50V	2
C521	ECKD1H102KB	0.001μF	50V	1
C541,542	ECKD1H102KB	0.001μF	50V	2
C547,548	ECKD1H471KB	470μF	50V	2
C605,606	ECKD1H102KB	0.001μF	50V	2
C703,704	ECKD1H102KB	0.001μF	50V	2
C709,710	ECKD1H471KB	470μF	50V	2
C711,712	ECKD1H151KB	150μF	50V	2
C857	ECKD1H223ZF	0.022μF	50V	1
C859	ECKD1H102KB	0.001μF	50V	1
C860	ECKD1H471KB	470μF	50V	1
C861,862	ECKD1H472KB	0.0047μF	50V	2
C863,864	ECKD1H472KB	0.0047μF	50V	2
C865,866	ECKD1H472KB	0.0047μF	50V	2
C867,868	ECKD1H472KB	0.0047μF	50V	2
C906,907	ECKD1H102KB	0.001μF	50V	2
C909	ECKD1H102KB	0.001μF	50V	1
C924,925 S	ECKDHS101MB	100pF	400V	2
C8123	ECKD1H102KB	0.001μF	50V	1
C8127	ECKD1H102KB	0.001μF	50V	1
C8163	ECKD1H102ZF	0.001μF	50V	1
C254	ECQM1H104MZ	0.1μF	50V	1
C260	ECQM1H104MZ	0.1μF	50V	1
C309,310	ECQM1H273MZ	0.027μF	50V	2
C409,410	ECQM1H153MZ	0.015μF	50V	2
C411,412	ECQM1H102MZ	0.001μF	50V	2
C430,431	ECQM1H333MZ	0.033μF	50V	2
C432,433	ECQM1H473MZ	0.047μF	50V	2
C434,435	ECQM1H123MZ	0.012μF	50V	2
C436,437	ECQM1H183MZ	0.018μF	50V	2
C440,441	ECQM1H183MZ	0.018μF	50V	2
C442,443	ECQM1H222MZ	0.0022μF	50V	2
C531,532	ECQM1H223MZ	0.022μF	50V	2
C533,534	ECQM1H183MZ	0.018μF	50V	2
C535,536	ECQM1H152MZ	0.0015μF	50V	2
C537,538	ECQM1H272MZ	0.0027μF	50V	2
C607,608	ECQM1H393MZ	0.039μF	50V	2
C609,610	ECQM1H103MZ	0.01μF	50V	2
C719,720	ECQM1H473MZ	0.047μF	50V	2
C810,811	ECQM1H273FZ	0.027μF	50V	2
C820,821	ECQM1H473JZ	0.047μF	50V	2

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	Per Set (pcs.)
C824,825	ECQM1H104KZ	0.1μF 50V	2
C826,827	ECQM1H334KZ	0.33μF 50V	2
C835	ECQM1H333JZ	0.033μF 50V	1
C836	ECQM1H123JZ	0.012μF 50V	1
C837	ECQM1H332JZ	0.0033μF 50V	1
C904	ECQM1H224MZ	0.22μF 50V	2
C251	ECQS1471JZ	470pF 125V	1
C258	ECQS1221JZ	220pF 125V	1
C259	ECQS1472JZ	4700pF 125V	1
C305	ECQS1152JZ	1500pF 125V	1
C401,402	ECQS1471JZ	470pF 125V	2
C808,809	ECQS1562JZ	5600pF 25V	2
C818,819	ECQS1472JZ	4700pF 25V	2
C830	ECQS1152JZ	1500pF 125V	1
C834	ECQS1361JZ	360pF 125V	1
C838,839	ECQS1331JZ	330pF 125V	2
C101,102	ECFD1E223MD	0.022μF 25V	2
C103,104	ECFD1E223MD	0.022μF 25V	2
C105,106	ECFD1E223MD	0.022μF 25V	2
C107	ECFD1E223MD	0.022μF 25V	1
C208,209	ECFD1E223MD	0.022μF 25V	2
C212	ECFD1E103MD	0.01μF 25V	1
C217	ECFD1E333MD	0.033μF 25V	1
C221	ECFD1E333MD	0.033μF 25V	1
C222	ECFD1E103MD	0.01μF 25V	1
C225	ECFD1E103MD	0.01μF 25V	1
C240	ECFD1E103MD	0.01μF 25V	1
C243	ECFD1E473MD	0.047μF 25V	1
C244	ECFD1E103MD	0.01μF 25V	1
C245	ECFD1E223MD	0.022μF 25V	1
C247	ECFD1E103MD	0.01μF 25V	1
C248	ECFD1E473MD	0.047μF 25V	1
C250	ECFD1E103MD	0.01μF 25V	1
C253	ECFD1E333MD	0.033μF 25V	1
C255	ECFD1E223MD	0.022μF 25V	1
C303	ECFD1E473MD	0.047μF 25V	1
C870	ECFD1E103MD	0.01μF 25V	1
C882	ECFD1E223MD	0.022μF 25V	1
C8101	ECFD1E223MD	0.022μF 25V	1
C8103	ECFD1E223MD	0.022μF 25V	1
C8105	ECFD1E223MD	0.022μF 25V	1
C8107	ECFD1E223MD	0.022μF 25V	1
C8109	ECFD1E223MD	0.022μF 25V	1
C8111	ECFD1E223MD	0.022μF 25V	1
C8113	ECFD1E223MD	0.022μF 25V	1

Ref. No.	Part No.	Description	Per Set (pcs.)
C8147	ECFD1E223MD	0.022μF 25V	1
C108	ECEA1ES101	100μF 25V	1
C110	ECEA1AS101	100μF 10V	1
C111	ECEA1HS100	10μF 50V	1
C112	ECEA1ES470	47μF 25V	1
C214	ECEA1HS100	10μF 50V	1
C215	ECEA1AS221	220μF 10V	1
C216	ECEA1AS470	47μF 10V	1
C219	ECEA1JS4R7	4.7μF 63V	1
C223	ECEA1HS100	10μF 50V	1
C224	ECEA1JS4R7	4.7μF 63V	1
C233	ECEA1HS100	10μF 50V	1
C235,236	ECEA2AS010	1μF 100V	2
C238	ECEA1AS221	220μF 10V	1
C265	ECEA16N10	10μF 16V	1
C301	ECEA1ES101	100μF 25V	1
C302	ECEA16N4R7	4.7μF 16V	1
C304	ECEA1ES470	47μF 25V	1
C308	ECEA2AS010	1μF 100V	1
C403,404	ECEA50M4R7	4.7μF 50V	2
C407,408	ECEA1CS330	33μF 16V	2
C413,414	ECEA2AS010	1μF 100V	2
C415	ECEA0JS471	470μF 6V	1
C416	ECEA1HS100	10μF 50V	1
C417,418	ECEA2AS010	1μF 100V	2
C419	ECEA2AS010	1μF 100V	1
C420,421	ECEA1AS101	100μF 10V	2
C426,427	ECEA2AS010	1μF 100V	2
C428,429	ECEA2AS010	1μF 100V	2
C438,439	ECEA1HS100	10μF 50V	2
C444,445	ECEA50M4R7	4.7μF 50V	2
C450	ECEA1ES101	100μF 25V	1
C505,506	ECEA1HS100	10μF 50V	2
C511,512	ECEA2AS3R3	3.3μF 100V	2
C513	ECEA1ES101	100μF 25V	1
C514	ECEA2AS010	1μF 100V	1
C519,520	ECEA2AS3R3	3.3μF 100V	2
C543,544	ECEA2AS010	1μF 100V	2
C549	ECEA1ES470	47μF 25V	1
C550	ECEA1JS4R7	4.7μF 63V	1
C601,602	ECEA50M4R7	4.7μF 50V	2
C611,612	ECEA1HS100	10μF 50V	2
C613,614	ECEA2AS010	1μF 100V	2
C615	ECEA1CS330	33μF 16V	1
C616	ECEA1ES101	100μF 25V	1
C701,702	ECEA50M3R3	3.3μF 50V	2

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	Per Set (pcs.)
C705,706	ECEA2AS3R3	3.3μF 100V	2
C707,708	ECEA2AS3R3	3.3μF 100V	2
C715,716	ECEA1ES470	47μF 25V	2
C717,718	ECEA2AS010	1μF 100VV	2
C721,722	ECEA2AS010	1μF 100V	2
C723,724	ECEA1VS221	220μF 35V	2
C725	ECEA1CS102	0.001μF 16V	1
C803,804	ECEA2AS010	1μF 100V	2
C805	ECEA1AS221	220μF 10V	1
C806,807	ECEA1HS100	10μF 50V	2
C812,813	ECEA2AS010	1μF 100V	2
C814,815	ECEA1HS100	1μF 50V	2
C816,817	ECEA1HS100	1μF 50V	2
C822,823	ECEA1HS100	1μF 50V	2
C833	ECEA1HS100	1μF 50V	1
C840	ECEA1HS100	1μF 50V	1
C841	ECEA1CS330	33μF 16V	1
C842,843	ECEA2AS010	1μF 100V	2
C844,845	ECEA2AS010	1μF 100V	2
C846,847	ECEA2AS010	1μF 100V	2
C848,849	ECEA2AS3R3	3.3μF 100V	2
C852	ECEA2AS010	1μF 100V	1
C853	ECEA1ES101	100μF 25V	1
C856	ECEA1ES470	47μF 25V	1
C858	ECEA1HS100	10μF 50V	1
C869	ECEA2AS010	1μF 100V	1
C871,872	ECEA2AS010	1μF 100V	2
C873	ECEA50N1	1μF 50V	1
C874	ECEA2AS010	1μF 100V	1
C875	ECEA2AS010	1μF 100V	1
C876	ECEA16N10	10μF 16V	1
C877,878	ECEA2AS010	1μF 100V	2
C879	ECEA2AS010	1μF 100V	1
C880	ECEA1HS100	10μF 50V	1
C881	ECEA2AS010	1μF 100V	1
C891	ECEA2AS3R3	3.3μF 100V	1
C892	ECEA1HS100	10μF 50V	1
C893,894	ECEA2AS3R3	3.3μF 100V	2
C908	ECEA1ES101	100μF 35V	1
C910	ECEA1ES470	47μF 25V	1
C911	ECEA1CS330	33μF 16V	1
C912	ECEA1CS221	220μF 16V	1
C913	ECEA1CS471	470μF 16V	1
C914	ECEA1ES471	470μF 25V	1
C915,916	ECEA1ES221	220μF 25V	2
C917	ECEA2AS010	1μF 100V	1
C918	ECEA1CS330	33μF 16V	1

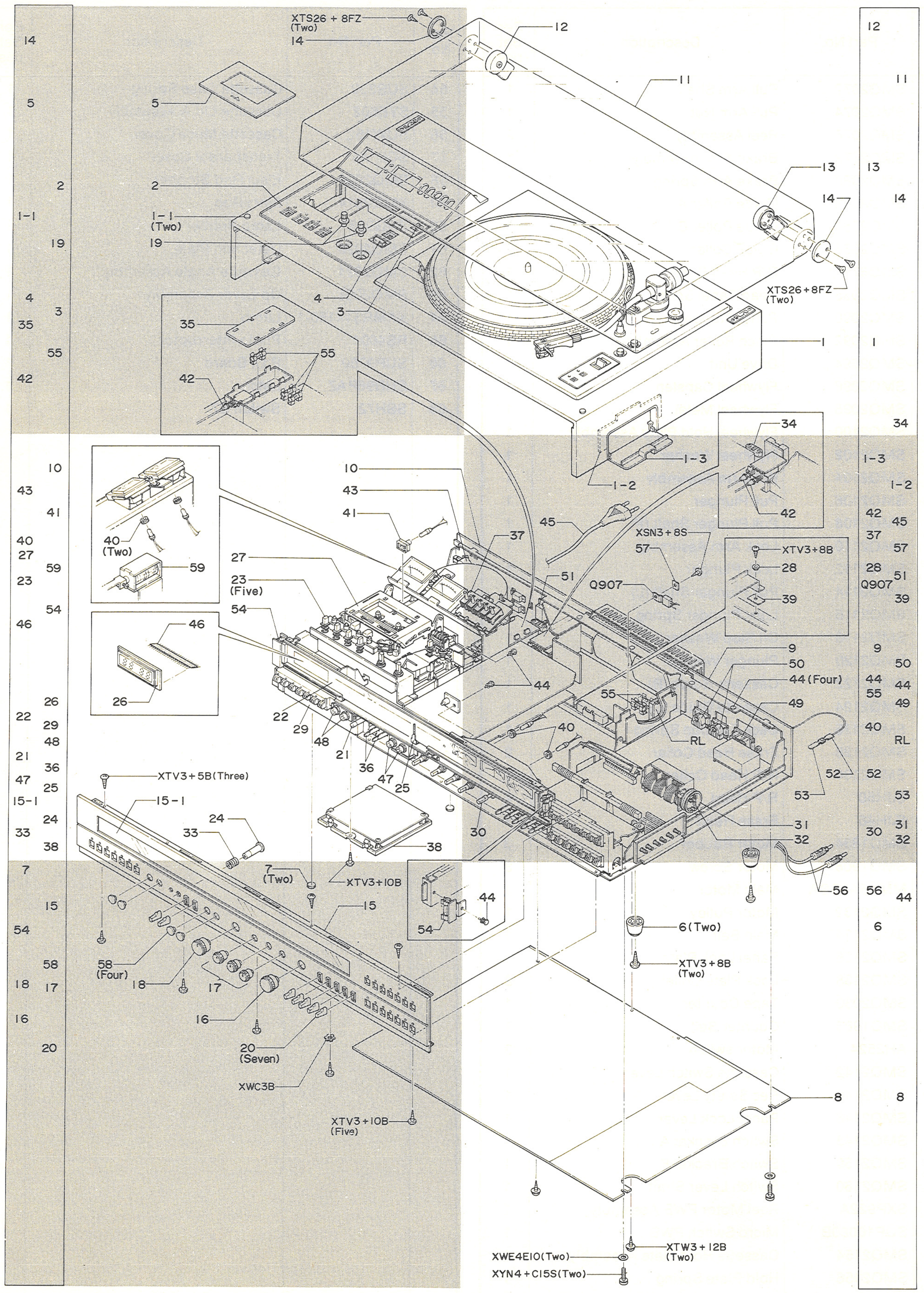
Ref. No.	Part No.	Description	Per Set (pcs.)
C919,920	ECEA1ES470	47μF 25V	2
C921	ECEA1HS100	10μF 50V	1
C922	ECEA1CS330	33μF 16V	1
C926	ECEA1CS330	33μF 16V	1
C8102	ECEA2AS010	1μF 100V	1
C8104	ECEA2AS010	1μF 100V	1
C8106	ECEA2AS010	1μF 100V	1
C8108	ECEA2AS010	1μF 100V	1
C8110	ECEA2AS010	1μF 100V	1
C8112	ECEA2AS010	1μF 100V	1
C8114	ECEA2AS010	1μF 100V	1
C8115	ECEA1CS330	33μF 16V	1
C8121	ECEA1ES470	47μF 25V	1
C8122	ECEA1HS100	10μF 50V	1
C8124	ECEA1JS4R7	1μF 63V	1
C8125,8126	ECEA2AS010	4.7μF 100V	2
C8128	ECEA1JS4R7	10μF 63V	1
C8129,8130	ECEA1HS100	1μF 50V	2
C8131	ECEA2AS010	1μF00V 1	
C8132,8133	ECEA16N10	10μF 16V	2
C8134	ECEA1JS4R7	4.7μF 63V	1
C8137,8138	ECEA16N10	10μF 16V	2
C8141	ECEA1HS100	10μF 50V	1
C8142,8143	ECEA1JS4R7	4.7μF 63V	2
C8144	ECEA1HS100	10μF 50V	1
C8145	ECEA50N1	1μF 50V	1
C8146	ECEA1ES470	47μF 50V	1
C8153,8154	ECEA1ES101	100μF 50V	2
C8155	ECEA1CS221	220μF 16V	1
C8156	ECEA1CS222	2200μF 16V	1
C8157	ECEA1HS100	10μF 50V	1
C8158,8159	ECEA1JS4R7	4.7μF 63V	2
C8160	ECEA1ES101	100μF 25V	1
C8161	ECEA1ES470	47μF 25V	1
C8171	ECEA1ES010	1μF 25V	1
C8172	ECEA1CS221	220μF 16V	1
C8173	ECEA1CS4R7	4.7μF 16V	1
C109	ECSF35ER22T	0.22μF 35V	1
C201	ECSF35ER68T	0.68μF 35V	1
C227	ECSF35ER47T	0.47μF 35V	1
C306	ECSF35ER47T	0.47μF 35V	1
C307	ECSF35ER22T	0.22μF 35V	1
C311,312	ECSF35ER22T	0.22μF 35V	2
C422,423	ECSF35ER33T	0.33μF 35V	2
C424,425	ECSF35ER68T	0.68μF 35V	2

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	Per Set (pcs.)
C448,449	ECSF35ER22T	0.22μF 35V	2
C501,502	ECSF35ER1T	0.1μF 35V	2
C507,508	ECSF35ER1T	0.1μF 35V	2
C515,516	ECSF35E1T	1μF 35V	2
C539,540	ECSF35E1T	1μF 35V	2
C545,546	ECSF35ER33T	0.33μF 35V	2
C801,802	ECSF35ER33T	0.33μF 35V	2
C831,832	ECSF35ER1T	0.1μF 35V	2
C850,851	ECSF35ER47T	0.47μF 35V	2
C8135,8136	ECSF35E1T	1μF 35V	2
C8139	ECSF35E1T	1μF 35V	1
C8140	ECSF35ER47T	0.47μF 35V	1
C8151,8152	ECSF35ER1T	1μF 35V	2
C8162	ECSF35E1T	1μF 35V	1
C901,902	ECET42R682	6800μF 42V	2
C903	ECET42R682	6800μF 42V	1
C905	ECET35R332	3300μF 35V	1
C8174	ECKD1H473KB	0.047μF 50V	1
CAPACITORS (RECORD PLAYER)			
C1	ECFD1E473MD	0.047μF 25V	1
C641,642	ECFD1E473MD	0.047μF 25V	2
C654	ECFD1E473MD	0.047μF 25V	1
C656,657	ECFD1E473MD	0.047μF 25V	2
C2,3	ECCD1H820K	82pF 50V	2
C650	ECSF35ER68T	0.68μF 35V	1
C643	ECEA1HS100	10μF 50V	1
C644	ECEA1CS330	33μF 16V	1
C645,646	ECEA1HS100	10μF 50V	2
C647,648	ECEA1HS100	10μF 50V	2
C649	ECEA1ES101	100μF 25V	1
C651	ECEA1ES101	100μF 25V	1
C652,653	ECEA1CS221	220μF 16V	2
C655	ECEA1CS330	33μF 16V	1
C658	ECEA1VS330	33μF 35V	1

Ref. No.	Part No.	Description	Per Set (pcs.)

PARTS LOCATION OF CABINET AND CHASSIS


XTS26 + 8FZ (Two)
14
12
11
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13
14
2
1-1 (Two)
19
4
3
XTS26+8FZ (Two)
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42
1
34
1-3
1-2
42
10
43
41
45
37
XSN3+8S
57
XTV3+8B
28
51
Q907
39
40 (Two)
59
27
23 (Five)
54
46
26
9
50
44 (Four)
49
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RL
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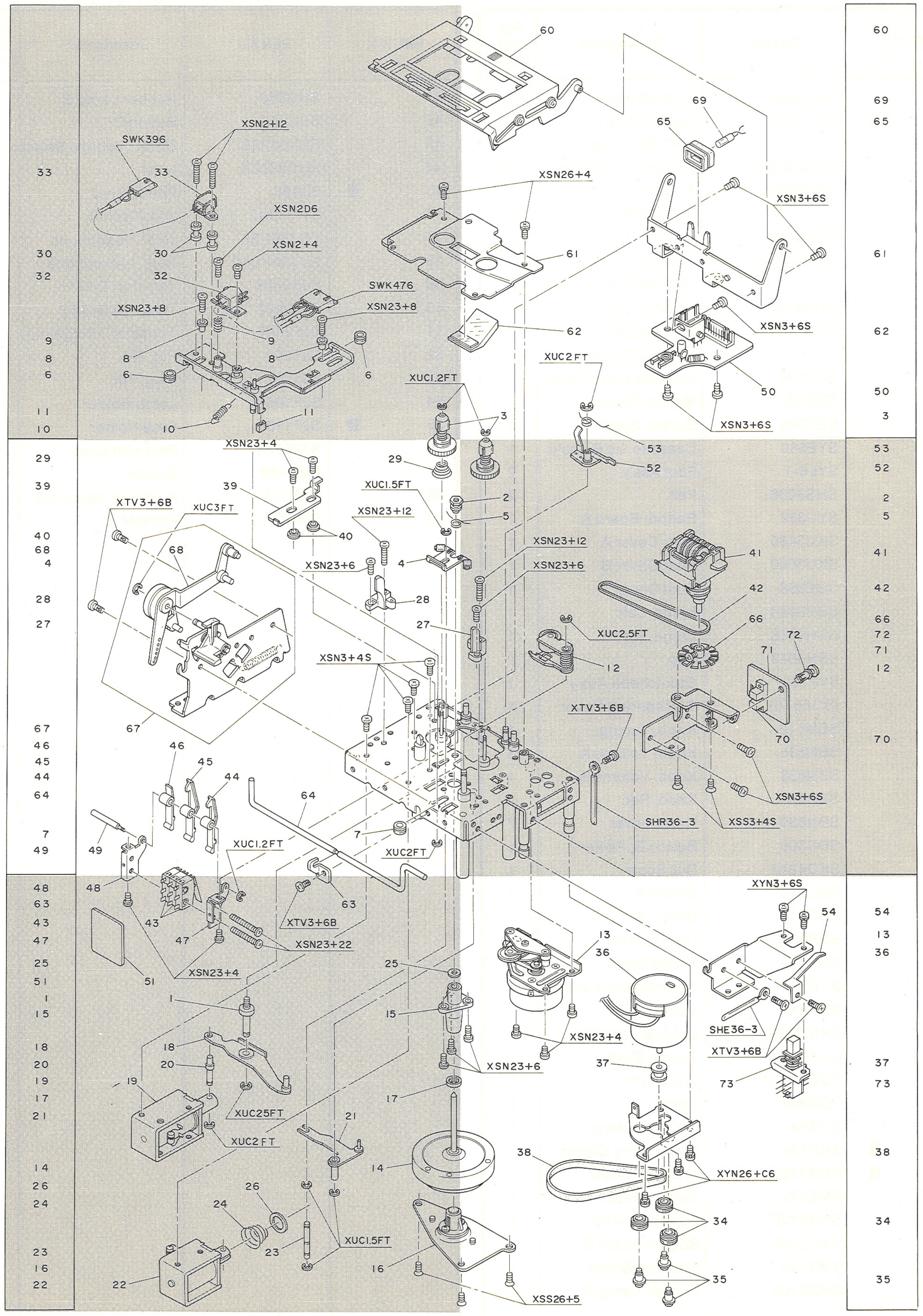
XTV3+5B(Three)
15-1
24
33
38
30
7 (Two)
XTV3+10B
15
44
54
56
6(Two)
XTV3+8B (Two)
58 (Four)
18
17
16
20 (Seven)
XWC3B
8
XTV3+10B (Five)
XWE4E10(Two)
XYN4+C15S(Two)
XTW3+12B (Two)

REPLACEMENT PARTS LIST OF CABINET AND CHASSIS

Ref. No.	Part No.	Description	Per Set (pcs.)
1	SKA2580	Cabinet Ass'y A	1
	SKA2600	Cabinet Ass'y A (SG-6070/(GE))	1
1-1	(SHG9058-1)	Rubber, Dust Cover	(2)
	(SHG9058)	Rubber, Dust Cover (SG-6070/(GE))	(2)
1-2	(SKE316)	Volume Holder	(1)
	(SKE316-1)	Volume Holder (SG-6070/(GE))	(1)
1-3	(SYE512)	Volume Lid	(1)
	(SYE512-1)	Volume Lid (SG-6070/(GE))	(1)
2	SYE596	Cassette Cover Ass'y	1
3	SBC304	Button, Reset	1
4	SBC306	Button, Eject	1
5	SYE580	Cassette Lid B Ass'y	1
6	SYL6-1	Foot Ass'y	2
7	SHS3036	Felt	2
8	SYU352	Bottom Board A	1
9	SKU3480	Rear Cover A	1
10	SKU3500	Rear Cover B	1
11	SGE856	Dust Cover	1
12	SBH9036	Hinge, Left	1
13	SBH9038	Hinge, Right	1
14	SBH9040	Cap	2
15	SYP382	Escutcheon Ass'y	1
15-1	(SGE870)	Transparent Cover	(1)
16	SBN842	Knob, Tuning	1
17	SBN836	Knob, Volume A	3
18	SBN838	Knob, Volume B	1
19	SBN844	Knob, Rec	2
20	SBN830	Knob, Lever	7
21	SBC308	Button B, Power	1
22	SKD4240	Dial Scale	1
23	SBC310	Button A	5
24	SBC312	Button B	1
25	SDP1012	Dial Pointer	1
26	SGE880	Tinted Glass	1
27	SYE602	Cassette Lid A Ass'y	1
28	SMX188	Spacer	1
29	SKM5520	Cabinet Ass'y B	1
30	SDT9304-2	Tuning Shaft	1
31	RDD323ZA	Dial Drum	1
32	RDS309	Spring	1
33	SUS84-1	Spring, Button	1
34 S	SHR134	Power Cord Clamp	1
35 S	SMX136-1	Insulator Cover	1
36	SME172	Switch Meca Ass'y	2
37	SHG9128	Rubber, Switch	1
38	SKF2160	Bottom Board B	1
39	SMX180	Insulator Sheet	1
40	SHG9100	Rubber Lamp A	4
41	SHG958	Rubber Lamp B	1
42	SBC226	Button C	3
43	RUV387ZB	Cover, Voltage Selector	1
44	RHR969ZA	Latch	7
45 S	SJA88	Power Cord	1
46	SW34JH3	Wire Socket	1
47	XCJS6PB8	Jack, Headphone	2
48	XCJS6PD10	Jack, Microphone	2
49	SJS9408	Terminal DIN Ant	1
50	SJF9102	Terminal DIN 5P	2
51	SJF9408	Terminal DIN Speaker	1
52	SJT208	Pin, FM	1
53	SJT708	Plug, FM	1
54	SJF106-1	Lamp Holder	2
55 S	SJF110	Fuse Holder	10
56	SJP2224	Plug with Lead	1
57	SME156	Spacer	1
58	SUV122	H. Phone Jack Cover	4
59	SMQ2042	Planger	1

EXPLODED VIEW OF CASSETTE TAPE DECK (SJD5000)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73
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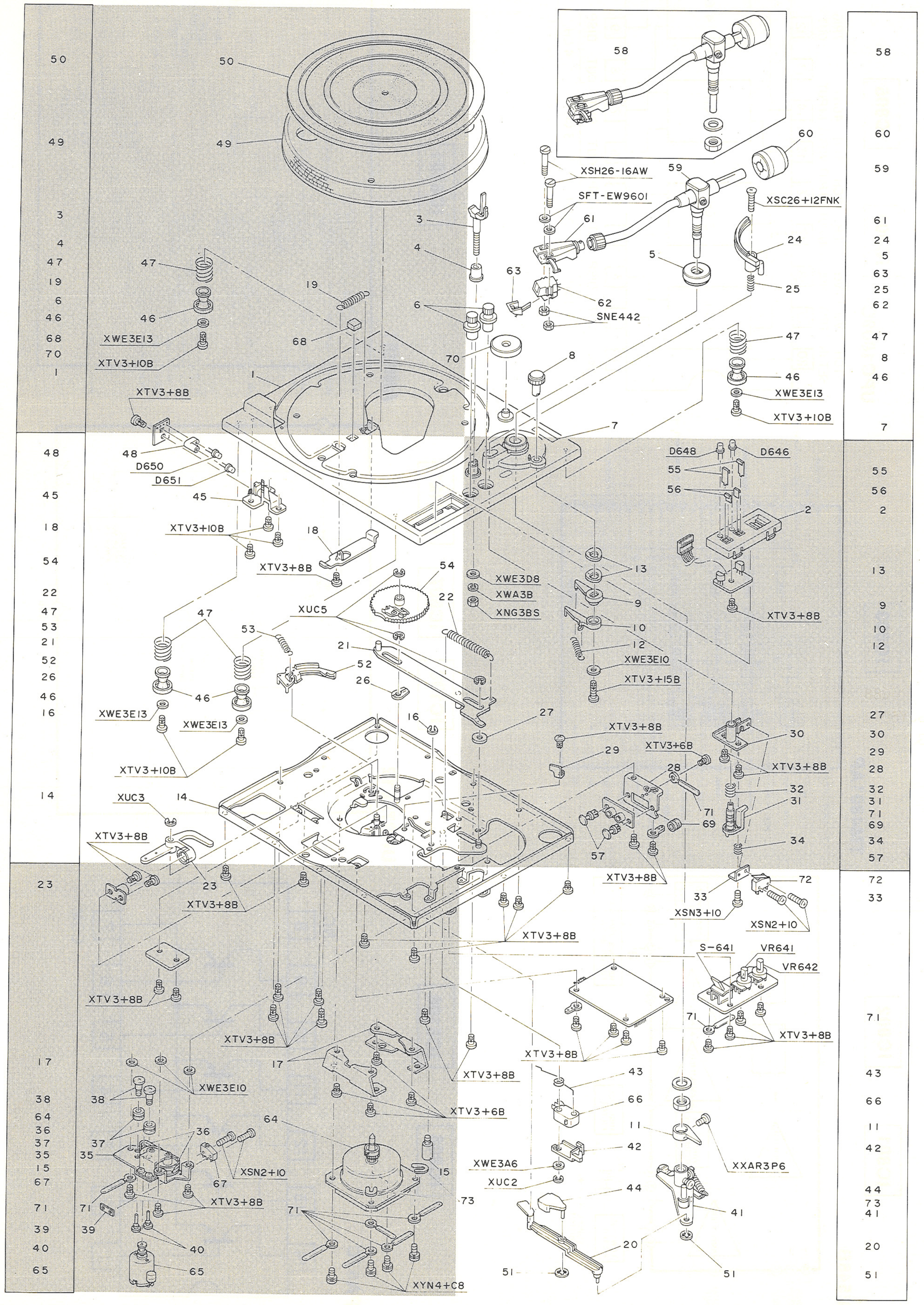
34
35
SWK396
XSN2+12
XSN2D6
XSN2+4
SWK476
XSN23+8
XSN23+8
XSN26+4
XSN3+6S
XUC2FT
XUC1.2FT
XSN3+6S
XSN3+6S
XSN23+4
XUC1.5FT
XTV3+6B
XUC3FT
XSN23+12
XSN23+6
XSN23+12
XSN23+6
XUC2.5FT
XSN3+4S
XTV3+6B
XSN3+6S
SHR36-3
XSS3+4S
XUC1.2FT
XUC2FT
XYN3+6S
XTV3+6B
XSN23+22
XSN23+4
SHE36-3
XTV3+6B
XSN23+4
XSN23+6
XUC25FT
XUC2FT
XYN26+C6
XUC1.5FT
XSS26+5

REPLACEMENT PARTS LIST OF CASSETTE TAPE DECK (SJD5000)

Ref. No.	Part No.	Description	Per Set (pcs.)
1	SMQ2072	Pull Arm Shaft	1
2	SMQ2074	Pull Arm Nut	1
3	SMQ2076	Reel Assembly	2
4	SMQ2078	Brake Arm Assembly	1
5	SMQ2080	Brake Arm Spring	1
6	SMQ2082	Guide Roller A	2
7	SMQ2084	Guide Roller B	1
8	SMQ2086	Guide Coller	2
9	SMQ678	R/P Head Spring	1
10	SMQ2088	Head Panel Spring	1
11	SMQ2090	Panel Stopper	1
12	SMQ2092	Pinch Roller Assembly	1
13	SMQ2094	Drive Unit	1
14	SMQ2096	Flywheel Capstan	1
15	SMQ2098	Flywheel Metal	1
16	SMQ2100	Flywheel Hold Plate Assembly	1
17	SMQ2102	Flywheel Washer	1
18	SMQ2104	Pull Arm Assembly	1
19	SMQ2106	Pull Plunger	1
20	SMQ2108	Pull Plunger Shaft (P)	1
21	SMQ2110	Lock Arm Assembly	1
22	SMQ2112	Lock Plunger	1
23	SMQ2114	Pull Plunger Shaft (L)	1
24	SMQ2116	Lock Plunger Spring	1
25	SMQ2118	Oil Stop Washer	1
26	SMQ2120	Plunger Washer	1
27	SMQ2122	Cassette Guide (R)	1
28	SMQ2124	Cassette Guide (L)	1
29	SMQ2126	Back Tension Spring	1
30	SMQ2128	Erase Head Collar	2
31	SMQ2130	R/P Head Collar	1
32	SJH50	R/P Head	1
33	SJH48	Erase Head	1
34	SMQ1834	Motor Rubber	3
35	SMQ1908	Motor Screw	3
36	MMX5A2RSA	Main Motor	1
37	SMQ2132	Motor Pulley	1
38	SMQ2134	Main Belt	1
39	SMQ2136	Panel Lock Plate	1
40	SMQ2138	Lock Plate Collar	2
41	SMQ2030	Tape Counter	1
42	SMQ1988	Counter Belt	1
43	AH2524	Motor switch	3
44	SMQ2142	Cassette Switch Lever	1
45	SMQ2144	Rec Safety Lever	1
46	SMQ2146	Panel Lock Lever	1
47	SMQ2148	Switch Bracket A	1
48	SMQ2150	Switch Bracket B	1
49	SMQ2160	Switch Lever Shaft	1
50	SXP922A	Reel Motor PWB Assembly	1
51	SUP10080B	Micro Switch PWB	1
52	SMQ2154	Cassette Hold Plate Assembly	1
53	SMQ2156	Hold Plate Spring	1
54	SUS302	Cassette Case Spring	1
55	SYE602	Cassette Lid A Assembly	1
56	SUW152	Cassette Meca Cover	1
57	SGL144	Transparent Cover	1
58	SMQ2022	Eject Rod Stopper	1
59	SMQ2014	Eject Rod	1
60	SHG958	Lamp Rubber	1
61	SMQ2028	Detection Plate	1
62	SMQ2024	Cassette Angle Assembly	1
63	SMQ2026	Up Lever Assembly	1
64	XAMR34X150-1	Lamp	1
65	RS4001	Photo Interruptor	1
66	SUP9780	P.C. Board	1
67	SHR96PAZ	Latch	1
68	SSH72	Switch S7	1

EXPLODED VIEW OF RECORD PLAYER (SP524A)



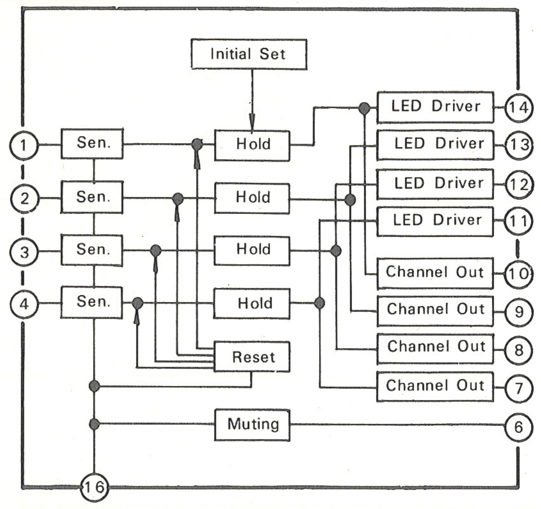
REPLACEMENT PARTS LIST OF RECORD PLAYER (SP524A)

Ref. No.	Part No.	Description	Per Set (pcs.)
1	SJY1016	Player Board Assembly	1
2	(SJY9452)	Sensor Board	(1)
3	SJY76-1	Arm Rest Assembly	1
4	SJY5092	Ornament, Arm Rest	1
5	SJY9474	Ornament, Tonearm Assembly	1
6	SJY130	Knob A	2
7	SQX9748	Label, Stylus	1
8	SJY122-1	Knob B	1
9	SJY9324	Skate Lever A	1
10	SJY9326	Skate Lever B	1
11	SJY9494	Skate Lever C	1
12	SJY9330	Skate Lever Spring A	1
13	SFXW831-5	Washer	2
14	SJY150	Player Panel Assembly	1
15	SJY9478	Eccentric Pin	1
16	SFXW130-01	Clip	1
17	SJY9438	Motor Angle	2
18	SJY9434	Turntable Holding Plate	1
19	SJY9064	Spring	1
20	SJY9440	Activating Plate	1
21	SJY138	Operating Plate	1
22	SJY9062	Spring, Operating	1
23	SJY9446	Reject Arm	1
24	SJY5100	Lift	1
25	SJY9228	Spring A, Lift	1
26	SJY5088	Spacer A	1
27	SJY5090	Spacer B	1
28	SJY9510	Bracket, Terminal Board	1
29	SJY9530	Stopper, Reject Arm	1
30	SJY146	Lift Assembly	1
31	SJY5086-1	Shaft, Lift	1
32	SJY9562	Spring, Lift	1
33	SJY9552	Bracket	1
34	SJY9554	Spring, Adjust	1
35	SJY140	Cueing Meca Assembly	1
36	SJY5102	Belt	2
37	SJY5096	Rubber Cushion	2
38	SJY9472	Screws, Motor	2
39	SJY9540	Adjust Plate	1
40	SJY9542	Spacer, Motor	2
41	SJY136	Restor Lever Assembly	1
42	SJY5104	Switch Cover	1
43	SJY9498	Spring, Switch Cover	1
44	SJY9044-1	Switch Control Plate	1
45	SJY9490	Strobo Cover	1
46	SJY5098	Foot	4
47	SJY9492	Spring, Plaer Board	4
48	SJY5108	Spacer, Strobo	1
49	SJY3016-1	Turntable	1
50	SFTG120-1	Turntable Mat	1
51	SNE428	Push Nut	2
52	SJY9528	Stop Lever	1
53	SJY9222	Spring, Stop	1
54	SJY170	Gear Assembly	1
55	SJT752	Terminal C	3
56	SJT758	Terminal D	2
57	RHR969ZA	Latch	2
58	EPU617SMAD	Tonearm Assembly with Shell Assembly Nut, Washer	1
59	SJY174	Tonearm	1
60	SJY154	Balance Weight Assembly	1
61	SJY152	Shell Assembly with Cartridge, Stylus	1
62	EPC2702-X	Cartridge with Stylus	1
63	EPS270ED	Stylus	1
64	DCL6070	DD Motor Assembly	1
65	MXN6070	Cueing Motor Assembly	1
66	AH74503	Micro Switch	1
67	SH2502	Micro Switch	1
68	SHG916	Rubber A	1
69	RHG3-1	Rubber B	1
70	SJY5018	45 r.p.m. Adaptor	1
71	SHE84	Clamp	1
72	SH2512	Micro Switch	1
73	SUD198	U Washer	2

IC BLOCK DIAGRAM

IC101

SN9402N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Sen.
Sen.
Sen.
Sen.
Hold
Hold
Hold
Hold
Reset
Muting
LED Driver
LED Driver
LED Driver
LED Driver
Channel Out
Channel Out
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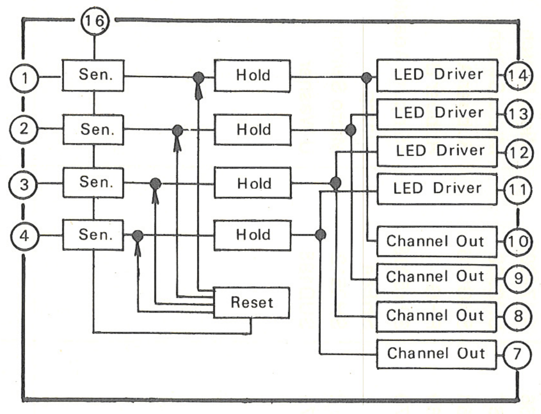
16

IC102

SN94041N


16
Sen.
Sen.
Sen.
Sen.
Hold
Hold
Hold
Hold
Reset
LED Driver
LED Driver
LED Driver
LED Driver
Channel Out
Channel Out
Channel Out
Channel Out
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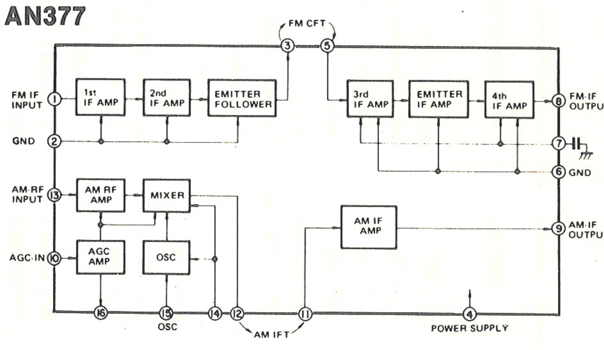
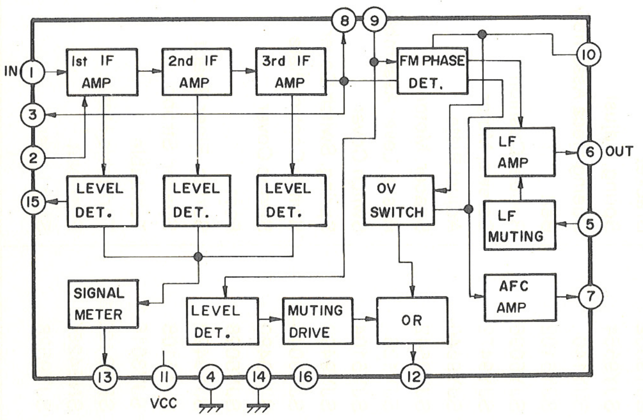
IC201

AN377


FM CFT
FM IF INPUT
GND
AM RF INPUT
AGC IN
1st IF AMP
2nd IF AMP
EMITTER FOLLOWER
3rd IF AMP
EMITTER IF AMP
4th IF AMP
AM RF AMP
MIXER
AGC AMP
OSC
AM IF AMP
FM IF OUTPUT
GND
AM IF OUTPUT
OSC
AM IFT
POWER SUPPLY

IC202

AN377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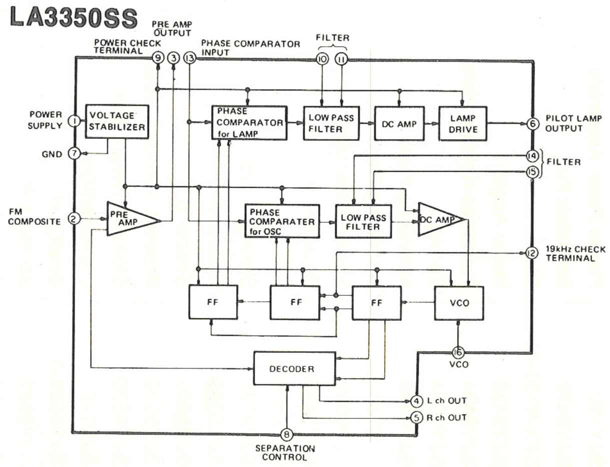
1st IF AMP
2nd IF AMP
3rd IF AMP
FM PHASE DET.
LF AMP
LF MUTING
AFC AMP
LEVEL DET.
LEVEL DET.
LEVEL DET.
OV SWITCH
SIGNAL METER
LEVEL DET.
MUTING DRIVE
OR
OUT
VCC

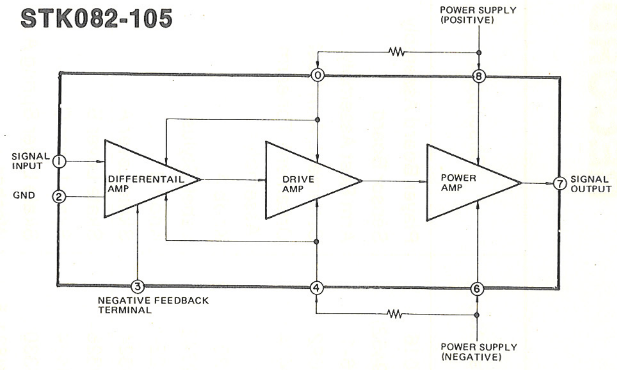
IC301

LA3350SS


PRE AMP OUTPUT
POWER CHECK TERMINAL
PHASE COMPARATOR INPUT
FILTER
POWER SUPPLY
GND
FM COMPOSITE
VOLTAGE STABILIZER
PRE AMP
PHASE COMPARATOR for LAMP
LOW PASS FILTER
DC AMP
LAMP DRIVE
PILOT LAMP OUTPUT
FILTER
PHASE COMPARATER for OSC
LOW PASS FILTER
DC AMP
19kHz CHECK TERMINAL
FF
FF
FF
VCO
VCO
DECODER
L ch OUT
R ch OUT
SEPARATION CONTROL

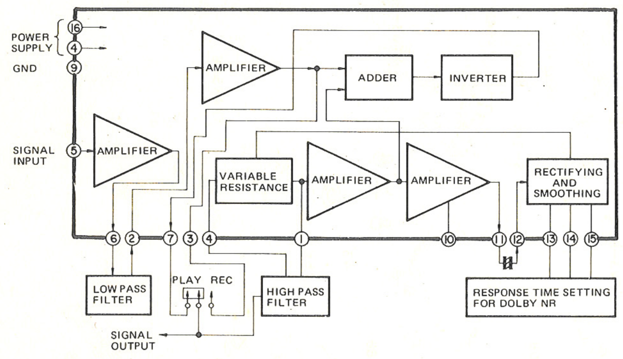
IC701 **IC702**

STK082-105


POWER SUPPLY (POSITIVE)
SIGNAL INPUT
GND
DIFFERENTAIL AMP
DRIVE AMP
POWER AMP
SIGNAL OUTPUT
NEGATIVE FEEDBACK TERMINAL
POWER SUPPLY (NEGATIVE)

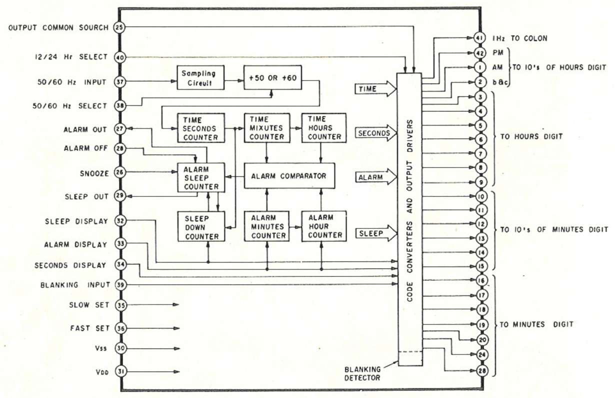
IC801 **IC802**

NE545B


POWER SUPPLY
GND
SIGNAL INPUT
AMPLIFIER
AMPLIFIER
ADDER
INVERTER
VARIABLE RESISTANCE
AMPLIFIER
AMPLIFIER
RECTIFYING AND SMOOTHING
LOW PASS FILTER
PLAY REC
HIGH PASS FILTER
RESPONSE TIME SETTING FOR DOLBY NR
SIGNAL OUTPUT

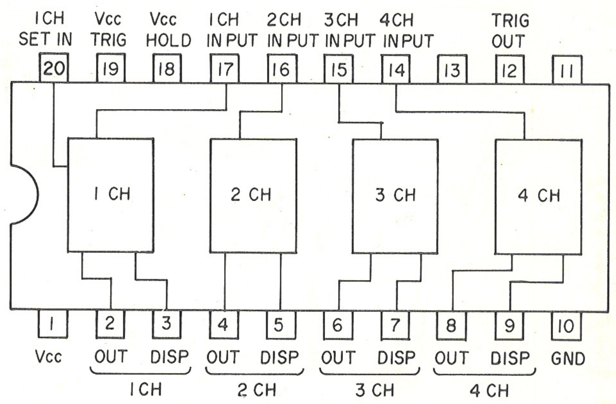
IC803

TM4801AP


OUTPUT COMMON SOURCH
12/24 Hr SELECT
50/60 Hz INPUT
50/60 Hz SELECT
ALARM OUT
ALARM OFF
SNOOZE
SLEEP OUT
SLEEP DISPLAY
ALARM DISPLAY
SECONDS DISPLAY
BLANKING INPUT
SLOW SET
FAST SET
Vss
Vdd
Sampling Circuit
÷50 OR ÷60
TIME SECONDS COUNTER
TIME MIXUTES COUNTER
TIME HOURS COUNTER
ALARM SLEEP COUNTER
ALARM COMPARATOR
SLEEP DOWN COUNTER
ALARM MINUTES COUNTER
ALARM HOUR COUNTER
TIME
SECONDS
ALARM
SLEEP
CODE CONVERTERS AND OUTPUT DRIVERS
BLANKING DETECTOR
1Hz TO COLON
PM
AM
b&c
TO 10's OF HOURS DIGIT
TO HOURS DIGIT
TO 10's OF MINUTES DIGIT
TO MINUTES DIGIT

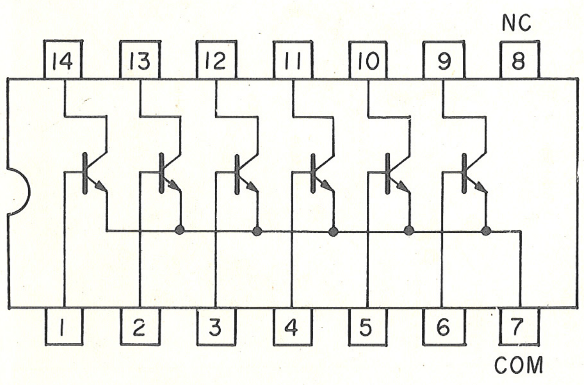
IC804 **IC805**

UPC1009C


1CH SET IN
Vcc TRIG
Vcc HOLD
1CH IN PUT
2CH IN PUT
3CH IN PUT
4CH IN PUT
TRIG OUT
1 CH
2 CH
3 CH
4 CH
Vcc
OUT
DISP
OUT
DISP
OUT
DISP
OUT
DISP
GND
1CH
2CH
3CH
4CH

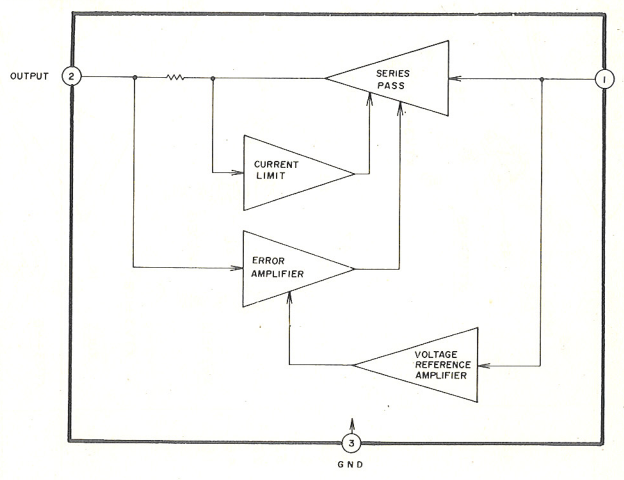
IC806 **IC8106**

UPA67C


NC
COM
1
2
3
4
5
6
7
8
9
10
11
12
13
14

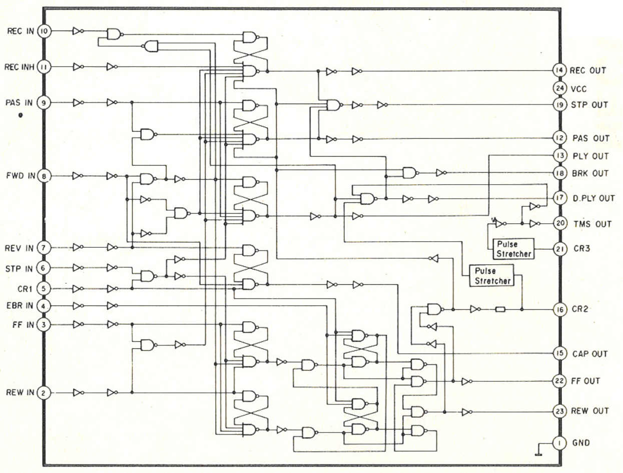
IC103 **IC807** **IC8121**

UPC78L12


OUTPUT
SERIES PASS
CURRENT LIMIT
ERROR AMPLIFIER
VOLTAGE REFERENCE AMPLIFIER
GND

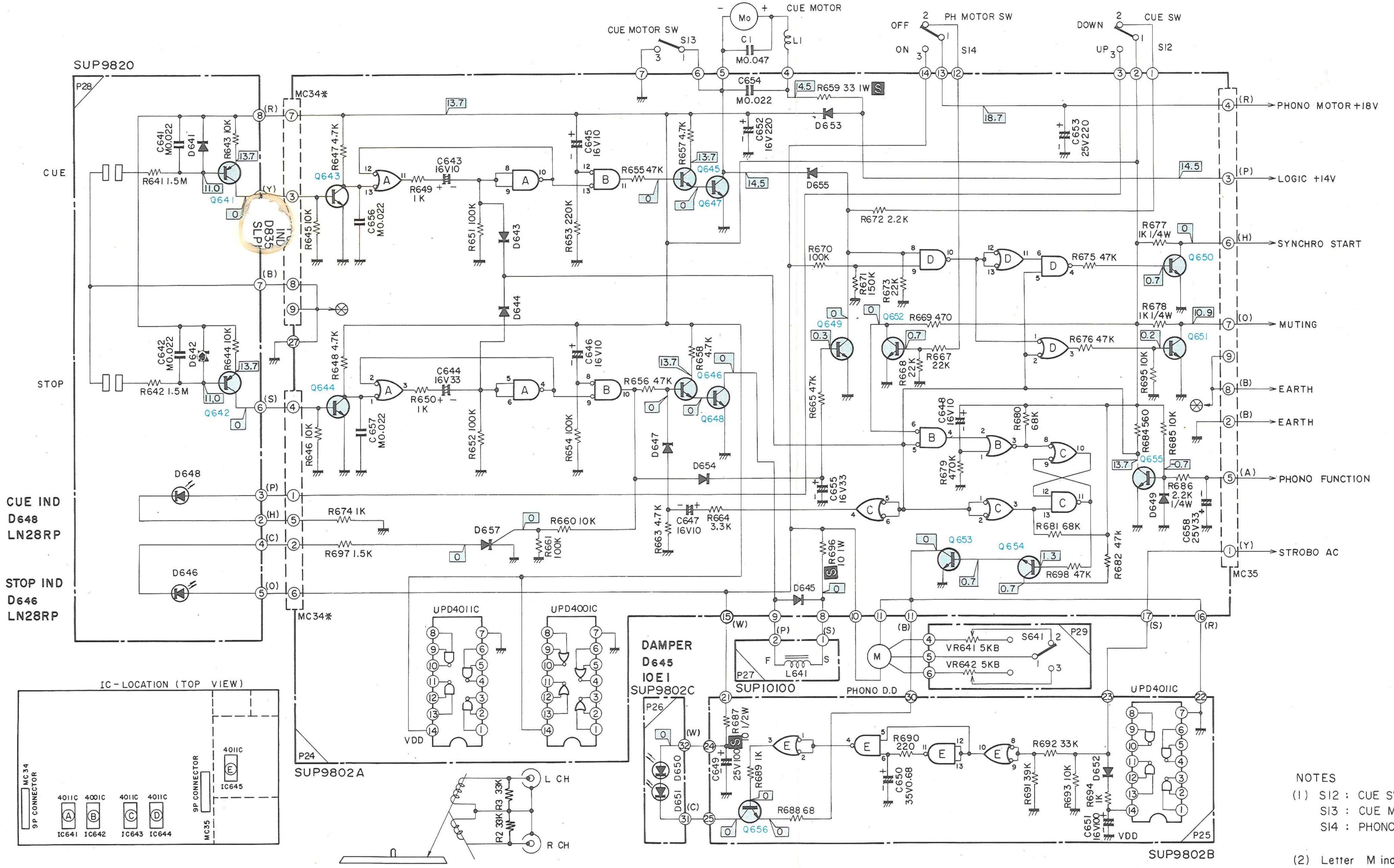
IC8101

AN6251


REC IN
REC INH
PAS IN
FWD IN
REV IN
STP IN
CR1
EBR IN
FF IN
REW IN
REC OUT
VCC
STP OUT
PAS OUT
PLY OUT
BRK OUT
D.PLY OUT
TMS OUT
CR3
Pulse Stretcher
Pulse Stretcher
CR2
CAP OUT
FF OUT
REW OUT
GND

SCHEMATIC DIAGRAM
(RECORD PLAYER CONTROL CIRCUIT)

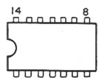
SURGE PROTECTER	TOUCH SENSOR	TOUCH SENSOR	SWITCHING	SWITCHING	AOC	INVERTER	SWITCHING
D641, 642 MA150	Q 641,642 2SA733A-QIY	Q643,644 2SC945L-P,Q	D643,644,647,654,655 MA150	Q645,646 2SC945L-P,Q Q647,648 2SC1847-Q,R	D645,653 10E1 SWITCHING Q649 2SC945L-P,Q	Q652 2SC945L-P,Q	Q650,651,655 2SC945L-P,Q


CUE MOTOR SW
S13
Mo
CUE MOTOR
C1 M0.047
L1
OFF
ON
PH MOTOR SW
S14
DOWN
UP
CUE SW
S12
SUP9820
P28
MC34※
CUE
STOP
CUE IND
D648
LN28RP
STOP IND
D646
LN28RP
C641 M0.022
D641
R643 10K
R641 1.5M
Q641
C642 M0.022
D642
R644 10K
R642 1.5M
Q642
R645 10K
R646 10K
R647 4.7K
R648 4.7K
Q643
Q644
C656 M0.022
C657 M0.022
C643 16V10
C644 16V33
R649 1K
R650 1K
R651 100K
R652 100K
D643
D644
R653 220K
R654 100K
C645 16V10
C646 16V10
R655 47K
R656 47K
R657 4.7K
R658 4.7K
Q645
Q646
Q647
Q648
D647
D654
C654 M0.022
R659 33 1W
D653
C652 16V220
C653 25V220
D655
R672 2.2K
R670 100K
R671 150K
R673 22K
R669 470
Q649
Q652
R668 22K
R667 22K
R665 47K
R675 47K
R676 47K
R677 1K 1/4W
R678 1K 1/4W
Q650
Q651
R695 10K
R685 10K
R684 560
Q655
D649
R686 2.2K 1/4W
C658 25V33
R680 68K
C648 16V10
R679 470K
R681 68K
R682 47K
C655 16V33
C647 16V10
R664 3.3K
R663 4.7K
R674 1K
R697 1.5K
D657
R660 10K
R661 100K
R696 10 1W
D645
Q653
Q654
R698 47K
PHONO MOTOR +18V
LOGIC +14V
SYNCHRO START
MUTING
EARTH
EARTH
PHONO FUNCTION
STROBO AC
MC35
UPD4011C
UPD4001C
VDD
DAMPER
D645
10E1
SUP9802C
P26
D650
D651
C649 25V100
R687 10 1/2W
R689 1K
Q656
R688 68
SUP10100
P27
F
S
L641
PHONO D.D
M
VR641 5KB
VR642 5KB
S641
P29
R690 220
C650 35V0.68
R691 39K
R692 33K
R693 10K
R694 1K
D652
C651 16V10
UPD4011C
P25
SUP9802B
P24
SUP9802A
IC-LOCATION (TOP VIEW)
MC34
9P CONNECTOR
4011C
4001C
IC641
IC642
IC643
IC644
IC645
MC35
R3 33K
R2 33K
L CH
R CH

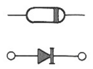
SWITCHING	STROBO IND	SWITCHING	SWITCHING	RECT	GUARD
D657 M21C	D650,651 BR5505S	Q656 2SC1317-R,S	Q654 2SC945L-P,Q Q653 2SC1847-Q,R	D652 MA150	D649 MA150

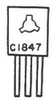
R	641 643 645 647 649 651 3 653 655 657 659 648 2 670 671 672 673 669 681 675 678 677 642 644 646 674 650 652 654 656 658 665 668 667 676 695 697 661 660 663 664 687 696 679 680 698 682 684 685 686 689 688 690 VR641 VR642 691 692 693 694
C	641 656 643 645 1 653 654 642 657 644 646 647 652 655 648 658 649 650 651
L	1 641
SW	13 14 641 12

* This diagram might be modified without notice for further development of technology.

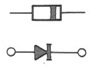

(TOP VIEW)

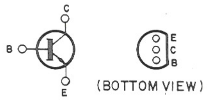
IC641,642,643,644
645


D641,642,643,644
647,649,652,654
655



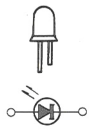
Q647,648,653

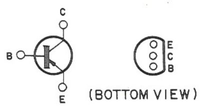

D653,645



(BOTTOM VIEW)

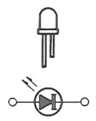
Q643,644,645,646,649
650,651, 652,654,655
656

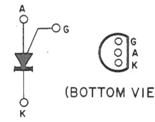

D650,651



(BOTTOM VIEW)

Q641, 642


D646,648



(BOTTOM VIEW)

Q657

NOTES
(1) S12 : CUE SW IN "DOWN" POSITION.
S13 : CUE MOTOR SW IN "OFF" POSITION.
S14 : PHONO MOTOR SW IN "OFF" POSITION.

(2) Letter M indicates tolerance of capacitors as follows
M=±20%

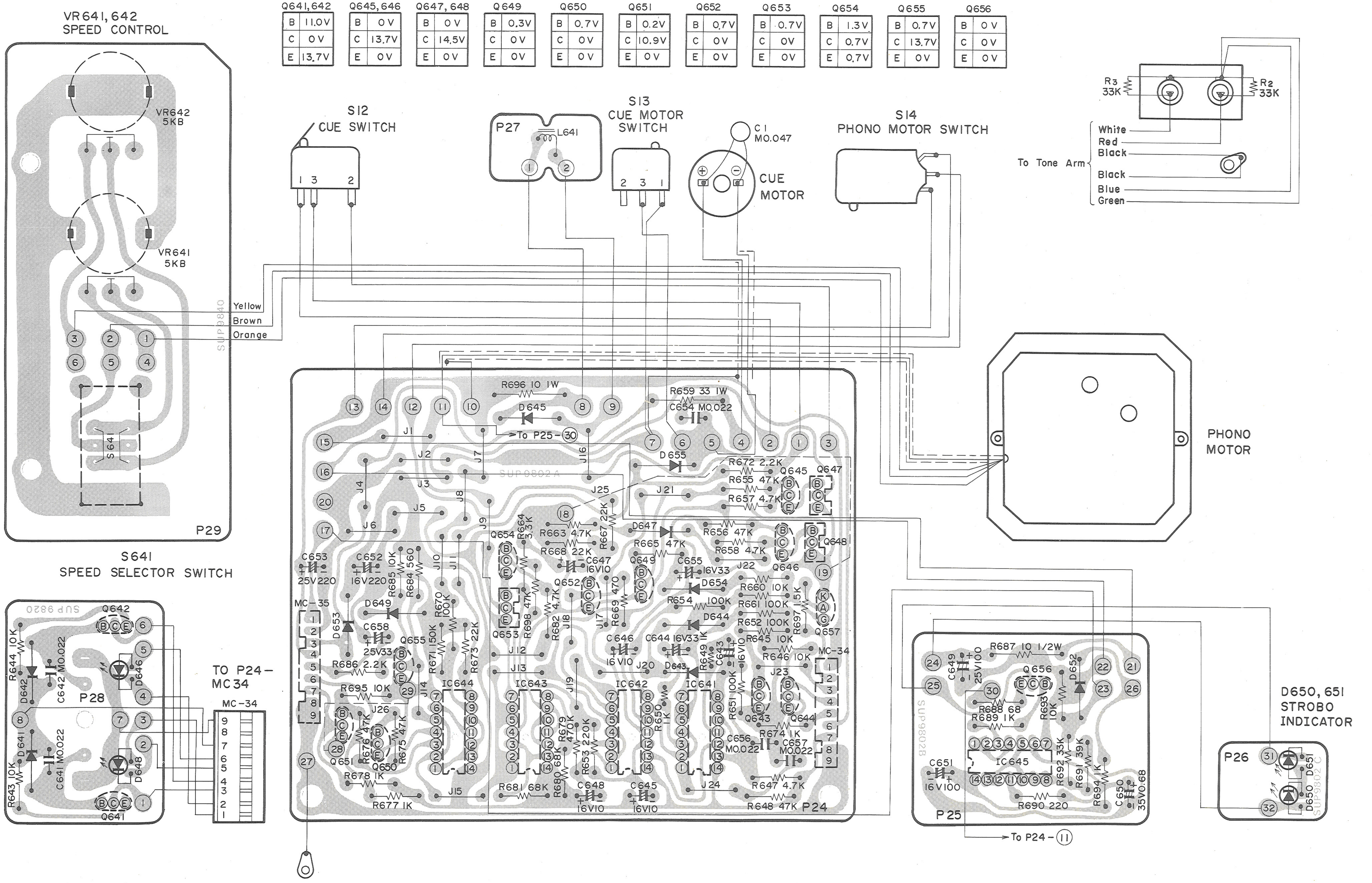
(3) DC Voltages shown in ▭ are to be measured with VTVM.

(4) THE S MARKS IS SAFETY PARTS

SCHEMATIC DIAGRAM
OF
PLAYER CONTROL CIRCUIT
MODEL NO. SG - 6070

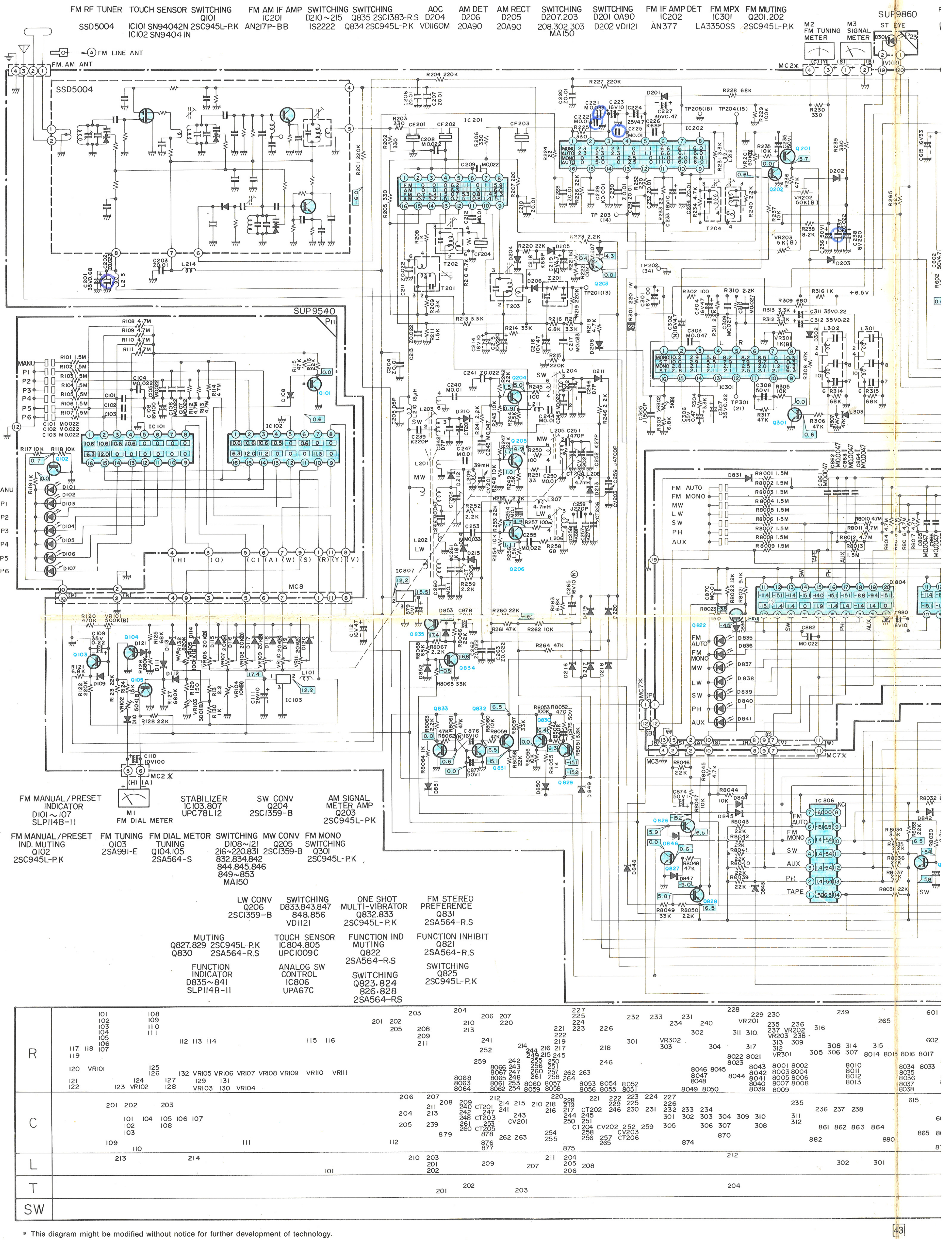
WIRING DIAGRAM
(RECORD PLAYER CONTROL CIRCUIT)

	Q641,642	Q645,646	Q647,648	Q649	Q650	Q651	Q652	Q653	Q654	Q655	Q656
B	11.0V	0V	0V	0.3V	0.7V	0.2V	0.7V	0.7V	1.3V	0.7V	0V
C	0V	13.7V	14.5V	0V	0V	10.9V	0V	0V	0.7V	13.7V	0V
E	13.7V	0V	0V	0V	0V	0V	0V	0V	0.7V	0V	0V


VR641, 642
SPEED CONTROL
VR642 5KB
VR641 5KB
S641
P29
Yellow
Brown
Orange
S641
SPEED SELECTOR SWITCH
P28
Q642
Q641
D646
D648
D641
D642
R644 10K
R643 10K
C642 M0.022
C641 M0.022
TO P24-MC34
MC-34
S12
CUE SWITCH
P27
L641
S13
CUE MOTOR SWITCH
C1 M0.047
CUE MOTOR
S14
PHONO MOTOR SWITCH
R3 33K
R2 33K
To Tone Arm
White
Red
Black
Black
Blue
Green
PHONO MOTOR
R696 10 1W
D645
To P25-㉚
R659 33 1W
C654 M0.022
D655
R672 2.2K
R655 47K
R657 4.7K
Q645
Q647
Q648
Q646
Q657
MC-35
MC-34
IC644
IC643
IC642
IC641
P24
P25
Q656
IC645
R687 10 1/2W
C649 25V100
R688 68
R689 1K
R693 10K
D652
C651 16V100
R692 33K
R691 39K
R694 1K
C650 35V0.68
R690 220
To P24-⑪
P26
D650, 651
STROBO INDICATOR
D650
D651

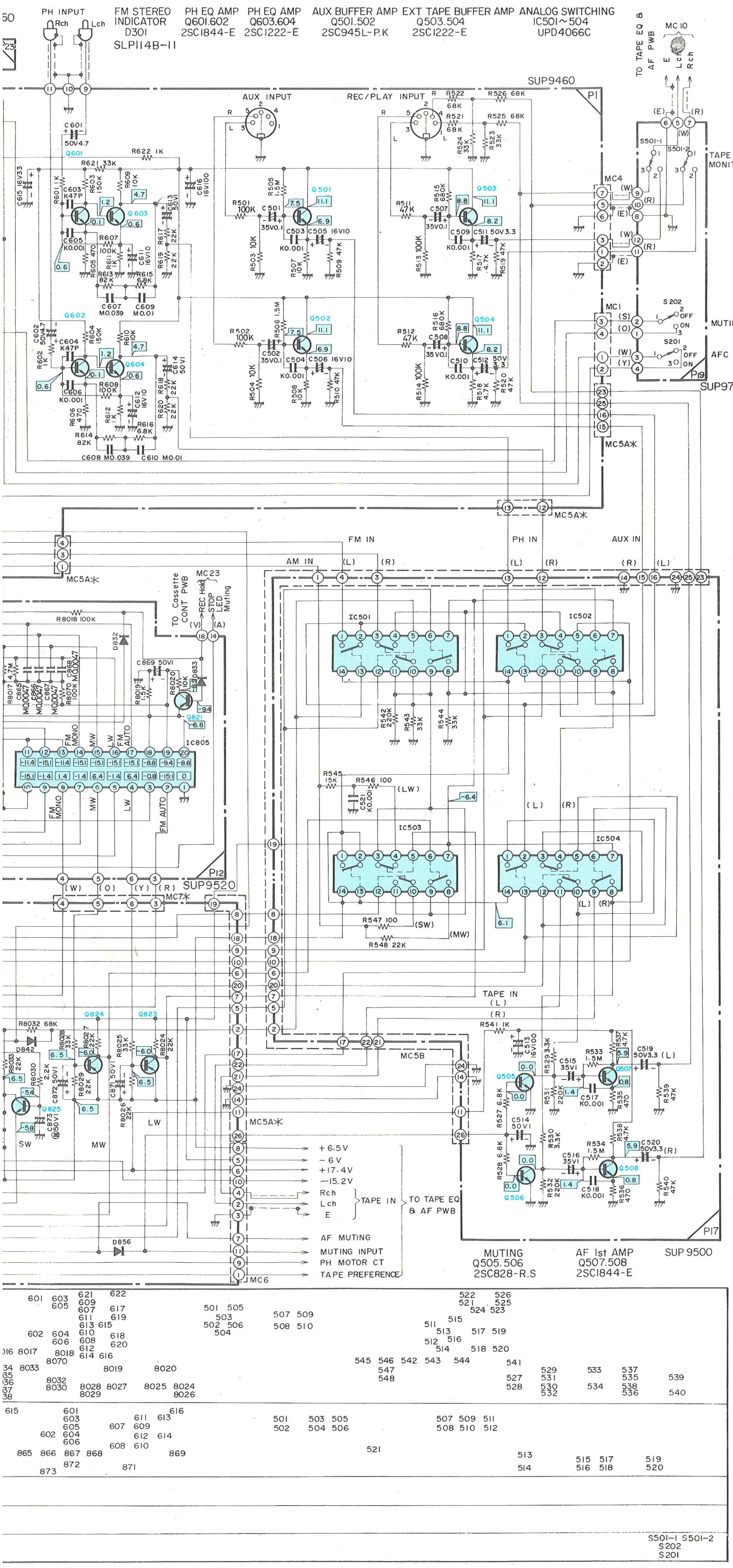
- This diagram might be modified without notice for further development of technology.

SCHEMATIC DI
(RF, AF AND TOUCH SENSOR

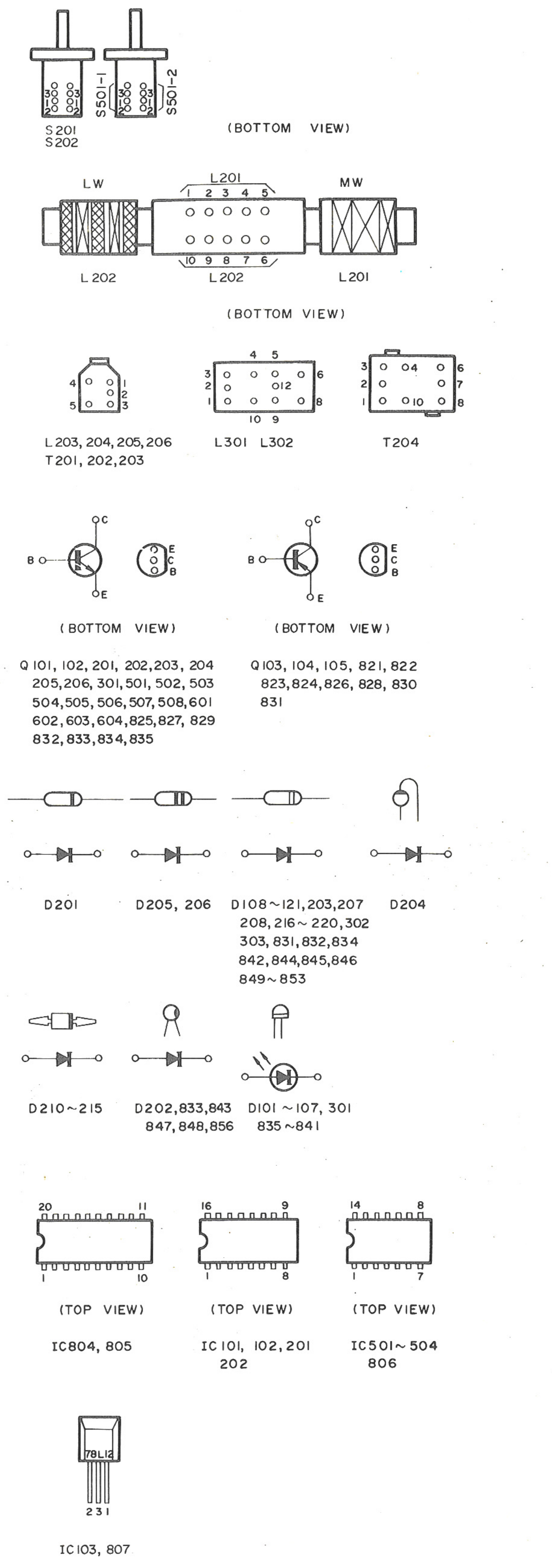

FM RF TUNER SSD5004
TOUCH SENSOR IC101 SN94042N IC102 SN9404IN
SWITCHING Q101 2SC945L-P.K
FM AM IF AMP IC201 AN217P-BB
SWITCHING D210~215 IS2222
SWITCHING Q835 2SC1383-R.S Q834 2SC945L-P.K
AOC D204 VD1160M
AM DET D206 20A90
AM RECT D205 20A90
SWITCHING D207.203 208.302.303 MA150
SWITCHING D201 0A90 D202 VD1121
FM IF AMP DET IC202 AN377
FM MPX IC301 LA3350SS
FM MUTING Q201.202 2SC945L-P.K
M2 FM TUNING METER
M3 SIGNAL METER
SUP9860
ST EYE
FM LINE ANT
FM. AM ANT
SSD5004
SUP9540
MANU
P1
P2
P3
P4
P5
P6
MC8
MC2
MC7
MC3
M1 FM DIAL METER
FM AUTO
FM MONO
MW
LW
SW
PH
AUX
TAPE
FM MANUAL/PRESET INDICATOR D101~107 SLP114B-11
STABILIZER IC103.807 UPC78L12
SW CONV Q204 2SC1359-B
AM SIGNAL METER AMP Q203 2SC945L-PK
FM MANUAL/PRESET IND. MUTING Q102 2SC945L-P.K
FM TUNING Q103 2SA991-E
FM DIAL METOR TUNING Q104.105 2SA564-S
SWITCHING D108~121 216~220.831 832.834.842 844.845.846 849~853 MA150
MW CONV Q205 2SC1359-B
FM MONO SWITCHING Q301 2SC945L-P.K
LW CONV Q206 2SC1359-B
SWITCHING D833.843.847 848.856 VD1121
ONE SHOT MULTI-VIBRATOR Q832.833 2SC945L-P.K
FM STEREO PREFERENCE Q831 2SA564-R.S
MUTING Q827.829 2SC945L-P.K Q830 2SA564-R.S
TOUCH SENSOR IC804.805 UPC1009C
FUNCTION IND MUTING Q822 2SA564-R.S
FUNCTION INHIBIT Q821 2SA564-R.S
FUNCTION INDICATOR D835~841 SLP114B-11
ANALOG SW CONTROL IC806 UPA67C
SWITCHING Q823.824 826.828 2SA564-RS
SWITCHING Q825 2SC945L-P.K
R
C
L
T
SW

* This diagram might be modified without notice for further development of technology.

DIAGRAM
OR CONTROL CIRCUIT)



PH INPUT
Rch
Lch
FM STEREO INDICATOR D301 SLP114B-11
PH EQ AMP Q601.602 2SC1844-E
PH EQ AMP Q603.604 2SC1222-E
AUX BUFFER AMP Q501.502 2SC945L-P.K
EXT TAPE BUFFER AMP Q503.504 2SC1222-E
ANALOG SWITCHING IC501~504 UPD4066C
TO TAPE EQ & AF PWB
MC10
SUP9460
P1
AUX INPUT
REC/PLAY INPUT
TAPE MONITOR SW
MUTING SW
AFC SW
P19
SUP9720
MC4
MC1
MC5A✱
MC23
TO Cassette CONT PWB
FM IN
PH IN
AUX IN
AM IN
IC501
IC502
IC503
IC504
IC805
P12
SUP9520
MC7✱
MC5B
MC6
TAPE IN
+6.5V
−6V
+17.4V
−15.2V
Rch
Lch
E
TAPE IN
TO TAPE EQ & AF PWB
AF MUTING
MUTING INPUT
PH MOTOR CT
TAPE PREFERENCE
MUTING Q505.506 2SC828-R.S
AF 1st AMP Q507.508 2SC1844-E
SUP9500
P17
S501-1 S501-2
S202
S201



S201
S202
S501-1
S501-2
(BOTTOM VIEW)
LW
MW
L201
L202
L202
L201
(BOTTOM VIEW)
L203, 204, 205, 206
T201, 202, 203
L301 L302
T204
(BOTTOM VIEW)
(BOTTOM VIEW)
Q101, 102, 201, 202, 203, 204
205, 206, 301, 501, 502, 503
504, 505, 506, 507, 508, 601
602, 603, 604, 825, 827, 829
832, 833, 834, 835
Q103, 104, 105, 821, 822
823, 824, 826, 828, 830
831
D201
D205, 206
D108~121, 203, 207
208, 216~220, 302
303, 831, 832, 834
842, 844, 845, 846
849~853
D204
D210~215
D202, 833, 843
847, 848, 856
D101~107, 301
835~841
(TOP VIEW)
(TOP VIEW)
(TOP VIEW)
IC804, 805
IC101, 102, 201
202
IC501~504
806
78L12
2 3 1
IC103, 807

NOTES

(1) S201 : AFC SWITCH IN "OFF" POSITION

S202 : FM IF MUTING SWITCH IN "OFF" POSITION

S501 : TAPE MONITOR SWITCH IN "SOURCE" POSITION

(2) Letters Z, M, K, J & F indicate tolerance of capacitors as follows

$Z = {}^{+80\%}_{-20\%}$ $M = \pm 20\%$ $K = \pm 10\%$ $J = \pm 5\%$ $F = \pm 1\%$

(3) DC voltages [illegible] be measured with DC VTVM under no [illegible]ition in "FM AUTO" position

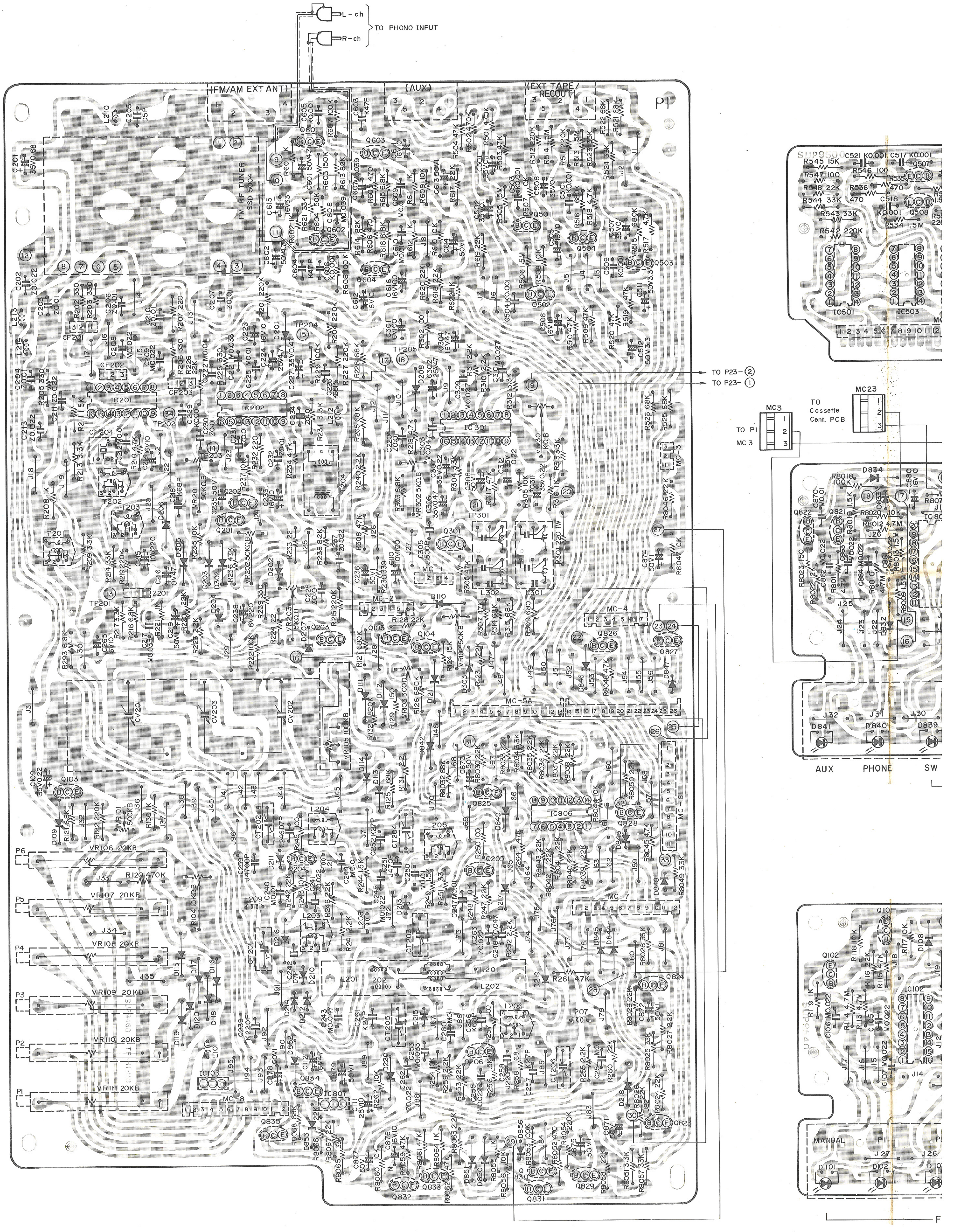
(4) DC voltages at AM circuit are to be measured with DC VTVM in "MW, LW and SW" position

(5) DC voltages at FM preset touch sensor circuit are to be measured with DC VTVM in "Manual" position

(6) THE **S** MARKS IS SAFETY PARTS

SCHEMATIC DIAGRAM
OF
RF AF AND TOUCH SENSOR CONTROL CIRCUITRY
MODEL NO. SG-6070

WIRING DIAR
(RF, AF AND TOUCH SENSOR


L-ch
R-ch
TO PHONO INPUT
(FM/AM EXT ANT)
(AUX)
(EXT TAPE/ RECOUT)
P1
FM RF TUNER SSD 5004
IC201
IC202
IC301
IC806
CV201
CV203
CV202
VR106 20KB
VR107 20KB
VR108 20KB
VR109 20KB
VR110 20KB
VR111 20KB
P6
P5
P4
P3
P2
P1
MC-2
MC-4
MC-5A
MC-6
MC-7
MC-8
TO P23-②
TO P23-①
MC3
TO P1
MC 3
MC23
TO Cassette Cont. PCB
SUP9500
IC501
IC503
AUX
PHONE
SW
MANUAL
P1

* This diagram might be modified without notice for further development of technology.

DIARGAM
SOR CONTROL CIRCUIT)

IC201	FM	AM
1	0V	0V
2	0V	0V
3	0V	0V
4	6.2V	6.3V
5	1.1V	1.1V
6	0V	0V
7	1.1V	1.1V
8	5.9V	6.0V
9	5.3V	5.1V
10	1.4V	1.4V
11	0.8V	0.8V
12	5.3V	5.1V
13	0.7V	0.7V
14	1.5V	1.5V
15	5.3V	5.2V
16	0.7V	0.7V

IC 225	MONO	AUTO
1	2.3V	2.3V
2	2.3V	2.3V
3	2.3V	2.3V
4	0V	0V
5	1.1V	1.1V
6	6.6V	6.6V
7	6.1V	6.1V
8	6.0V	6.0V
9	6.0V	6.0V
10	6.0V	6.0V
11	11.0V	11.0V
12	0V	0V
13	2.5V	2.5V
14	0V	0V
15	5.0V	5.0V
16	5.0V	0V

IC 301	MONO	ST
1	10.2V	10.0V
2	2.9V	2.9V
3	5.6V	5.5V
4	8.2V	7.9V
5	8.2V	7.9V
6	6.5V	9.7V
7	0V	0V
8	0.3V	0.3V
9	6.3V	6.3V
10	1.2V	2.1V
11	2.0V	2.1V
12	2.5V	2.5V
13	2.1V	2.1V
14	2.1V	2.1V
15	2.1V	2.1V
16	2.8V	2.8V

IC806	
1	-5.0V
2	1.4V
3	1.4V
4	1.4V
5	1.4V
6	-15.1V
7	-6.0V
8	0V
9	6.5V
10	-5.4V
11	-5.4V
12	-5.4V
13	-5.4V
14	6.5V

IC103	
1	17.4V
2	12.2V
3	0V

IC807	
1	15.5V
2	12.2V
3	0V

Q201	
B	0V
C	5.7V
E	0V

Q202	
B	0V
C	0V
E	0.6V

Q203	
B	0.4V
C	4.3V
E	0V

Q204	
B	1.5V
C	5.0V
E	0.9V

Q205	
B	1.7V
C	4.9V
E	1.0V

Q206	
B	1.7V
C	4.9V
E	1.1V

Q601,602	
B	0.6V
C	1.2V
E	0.1V

Q603,604	
B	1.2V
C	4.7V
E	0.6V

Q501,502	
B	7.5V
C	11.1V
E	6.9V

Q503,504	
B	8.8V
C	11.1V
E	8.2V

Q507,508	
B	1.4V
C	5.9V
E	0.8V

Q505,506	
B	0V
C	0V
E	0V

Q823	
B	6.5V
C	6.0V
E	6.5V

Q826	
B	5.9V
C	-15.2V
E	6.5V

Q829	
B	-15.1V
C	6.7V
E	-15.2V

Q832	
B	0V
C	6.5V
E	0V

Q835	
B	16.2V
C	17.4V
E	15.5V

Q824	
B	6.5V
C	-6.0V
E	6.5V

Q827	
B	0.6V
C	0V
E	0V

Q830	
B	6.4V
C	0V
E	6.5V

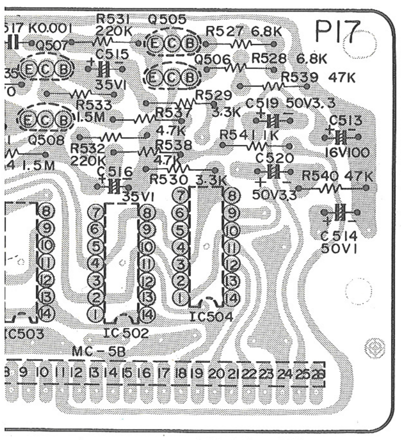
Q833	
B	0.6V
C	0V
E	0V

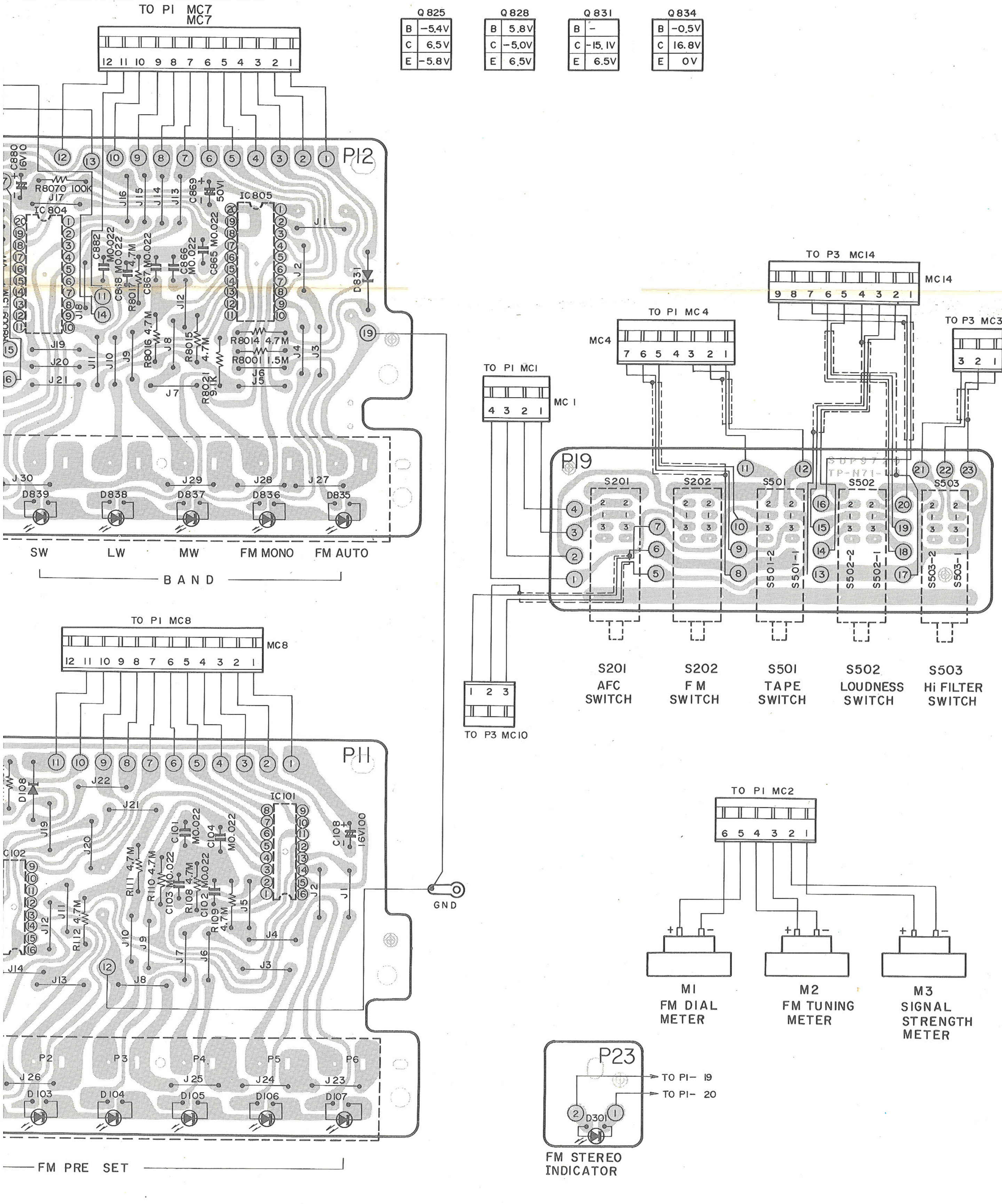
Q825	
B	-5.4V
C	6.5V
E	-5.8V

Q828	
B	5.8V
C	-5.0V
E	6.5V

Q831	
B	-
C	-15.1V
E	6.5V

Q834	
B	-0.5V
C	16.8V
E	0V


R531
220K
Q505
R527 6.8K
P17
K0.001
Q507
C515
35V1
R528 6.8K
Q506
R539 47K
R533
1.5M
R529
3.3K
C519 50V3.3
C513
16V100
Q508
R532
220K
R541 1K
R538
47K
C520
R540 47K
C516
35V1
R530 3.3K
50V3.3
C514
50V1
1.5M
IC503
IC502
IC504
MC-5B
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26


TO P1 MC7
MC7
12 11 10 9 8 7 6 5 4 3 2 1
P12
C880
16V10
R8070 100K
J17
IC804
J16
J15
J14
J13
C869
50V1
IC805
J1
C882 M0.022
C818 M0.022
R8017 4.7M
C867 M0.022
C866 M0.022
C865 M0.022
J12
R8016 4.7M
J8
R8015
R8014 4.7M
R8001 1.5M
R8021 9.1K
D831
J2
J3
J4
J5
J6
J7
J9
J10
J11
J18
J19
J20
J21
J30
J29
J28
J27
D839
D838
D837
D836
D835
SW
LW
MW
FM MONO
FM AUTO
BAND
TO P1 MC8
MC8
12 11 10 9 8 7 6 5 4 3 2 1
P11
D108
J22
J21
J19
J20
IC101
C108
16V100
C102
C101 M0.022
C104 M0.022
C103 M0.022
R111 4.7M
R110 4.7M
R108 4.7M
R109 4.7M
R112 4.7M
J11
J12
J9
J10
J7
J6
J5
J4
J3
J2
J1
J8
J13
J14
GND
P2
P3
P4
P5
P6
J26
J25
J24
J23
D103
D104
D105
D106
D107
FM PRE SET
TO P3 MC14
MC14
9 8 7 6 5 4 3 2 1
TO P1 MC4
MC4
7 6 5 4 3 2 1
TO P3 MC36
MC36
3 2 1
TO P1 MC1
MC1
4 3 2 1
P19
S201
S202
S501
S502
S503
S501-2
S501-1
S502-2
S502-1
S503-2
S503-1
1 2 3
TO P3 MC10
S201
AFC
SWITCH
S202
FM
SWITCH
S501
TAPE
SWITCH
S502
LOUDNESS
SWITCH
S503
Hi FILTER
SWITCH
TO P1 MC2
6 5 4 3 2 1
+
-
M1
FM DIAL
METER
M2
FM TUNING
METER
M3
SIGNAL
STRENGTH
METER
P23
TO P1- 19
TO P1- 20
D301
FM STEREO
INDICATOR

IC804	
1	0V
2	1.4V
3	-1.4V
4	1.4V
5	-1.4V
6	11.9V
7	0V
8	1.4V
9	-1.4V
10	-15.1V
11	-11.4V
12	-15.1V
13	-11.4V
14	-15.1V
15	-14.0V
16	-15.1V
17	-15.1V
18	-8.8V
19	-9.4V
20	-15.1V

IC805	
1	0V
2	-15.1V
3	-0.8V
4	6.4V
5	-1.4V
6	6.4V
7	-1.4V
8	1.4V
9	-1.4V
10	-15.1V
11	-11.4V
12	-15.1V
13	-11.4V
14	-15.1V
15	-15.1V
16	-15.1V
17	-15.1V
18	-8.8V
19	-9.4V
20	-8.8V

Q821	
B	-9.4V
C	-8.9V
E	-8.8V

Q822	
B	-4.5V
C	-15.1V
E	-3.8V

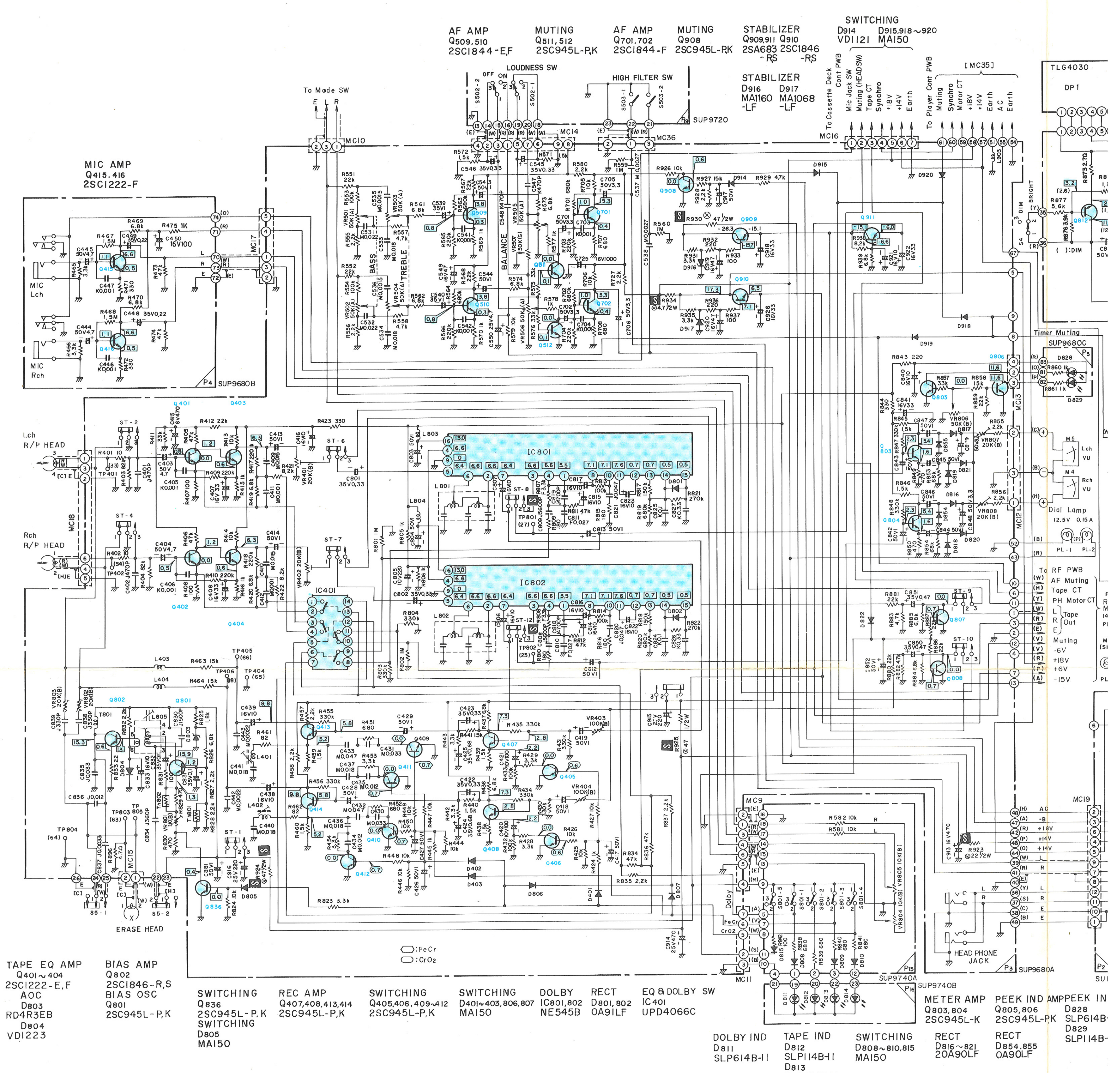
IC102	
1	10.6V
2	10.6V
3	10.6V
4	10.5V
5	0V
6	0.6V
7	0V
8	0V
9	0V
10	11.3V
11	0V
12	0V
13	0V
14	11.2V
15	12.0V
16	6.3V

IC101	
1	10.6V
2	10.6V
3	10.6V
4	10.6V
5	0V
6	0V
7	0V
8	0V
9	0V
10	0V
11	0V
12	0V
13	0V
14	0V
15	12.0V
16	6.3V

Q102	
B	0.7V
C	0V
E	0V

Q101	
B	0.6V
C	0V
E	0V

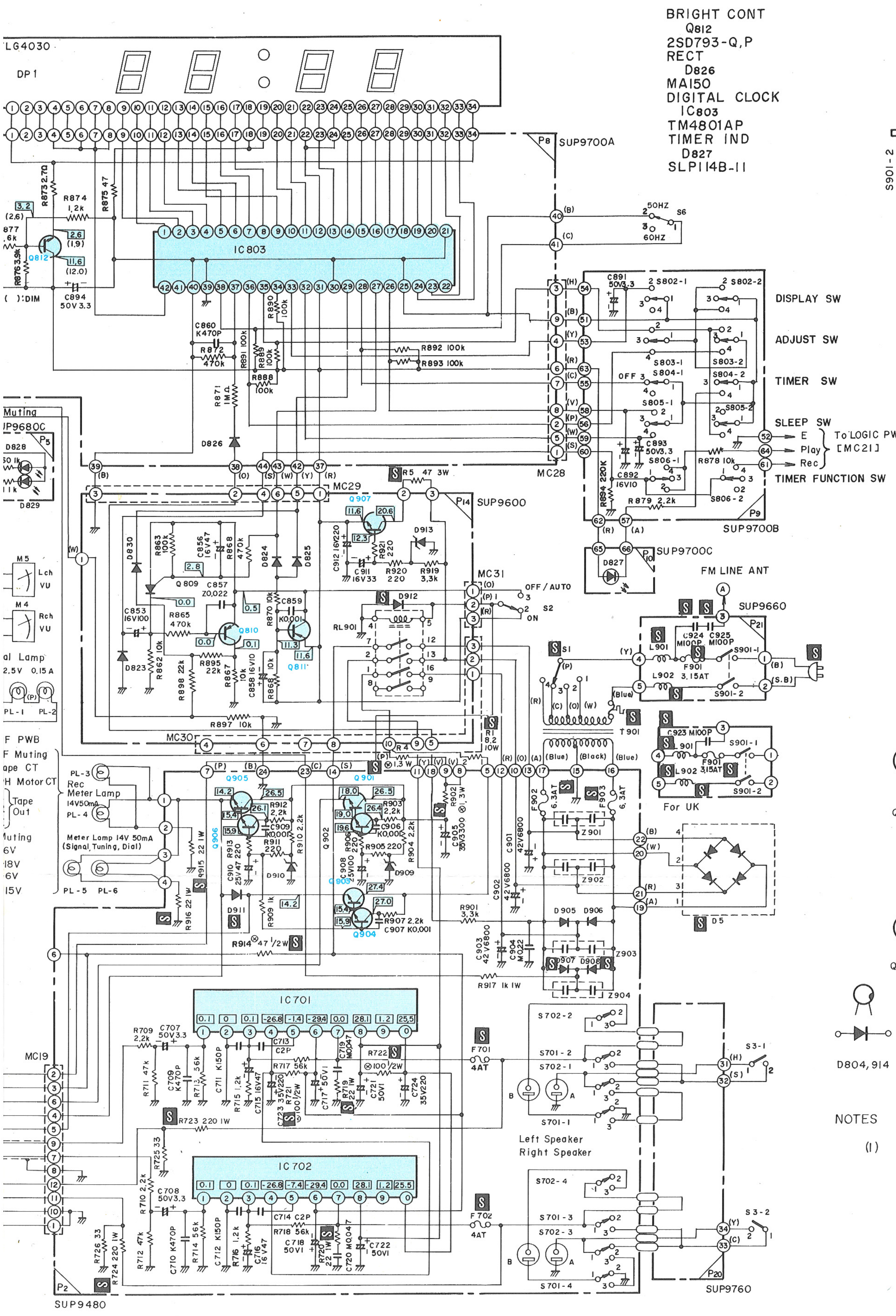
SCHEMATIC DIA
(AF CIRCUI


AF AMP Q509,510 2SC1844-E,F
MUTING Q511,512 2SC945L-P,K
AF AMP Q701,702 2SC1844-F
MUTING Q908 2SC945L-P,K
STABILIZER Q909,911 Q910 2SA683 2SC1846 -RS -RS
STABILIZER D916 D917 MA1160 MA1068 -LF -LF
SWITCHING D914 D915,918~920 VD1121 MA150
MIC AMP Q415,416 2SC1222-F
LOUDNESS SW
HIGH FILTER SW
To Made SW
TLG4030
IC801
IC802
IC401
MIC Lch
MIC Rch
Lch R/P HEAD
Rch R/P HEAD
ERASE HEAD
HEAD PHONE JACK
Dial Lamp 12.5V 0.15A
Timer Muting
To RF PWB
TAPE EQ AMP Q401~404 2SC1222-E,F
BIAS AMP Q802 2SC1846-R,S
AOC D803 RD4R3EB
BIAS OSC Q801 2SC945L-P,K
D804 VD1223
SWITCHING Q836 2SC945L-P,K
SWITCHING D805 MA150
REC AMP Q407,408,413,414 2SC945L-P,K
SWITCHING Q405,406,409~412 2SC945L-P,K
SWITCHING D401~403,806,807 MA150
DOLBY IC801,802 NE545B
RECT D801,802 OA91LF
EQ & DOLBY SW IC401 UPD4066C
METER AMP Q803,804 2SC945L-K
PEEK IND AMP Q805,806 2SC945L-P,K
PEEK IN D828 SLP614B D829 SLP114B-
DOLBY IND D811 SLP614B-11
TAPE IND D812 SLP114B-11 D813 SLP614B-11 D814 SLP214B-11
SWITCHING D808~810,815 MA150
RECT D816~821 20A90LF
RECT D854,855 OA90LF
:FeCr
:CrO2

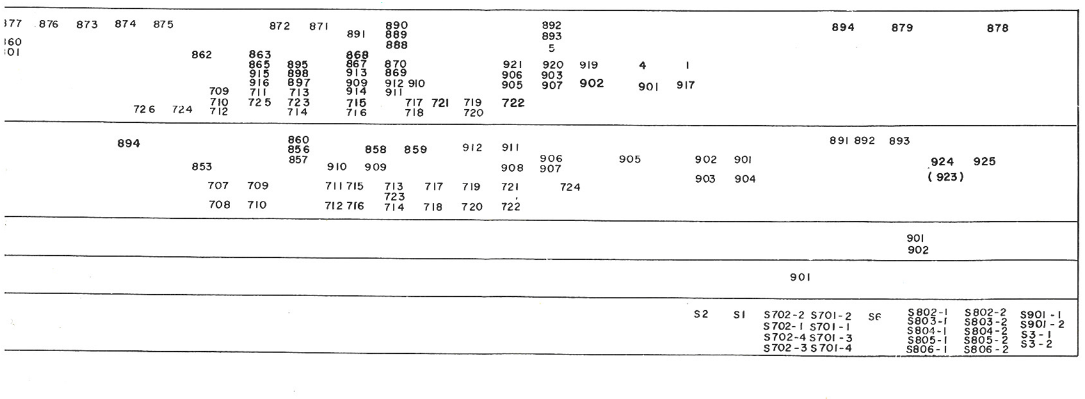
R	VR803 VR802 465 466 467 468 401 402 833 896 471 472 403 404 832 469 470 473 474 411 831 830 475 405 407 406 408 829 VR801 412 409 410 463 464 413 415 414 416 825 826 824 417 419 418 420 827 828 421 422 461 924 VR401 VR402 457 458 462 459 460 423 455 456 823 454 551 552 553 VR501 554 VR502 451 453 555 556 801 803 452 VR503 VR504 450 448 805 804 802 449 446 561 557 562 558 806 447 445 444 563 565 564 566 443 442 572 441 440 567 569 568 570 437 439 436 428 571 VR507 574 579 435 433 434 432 429 428 573 VR505 575 VR506 807 808 430 577 576 578 809 810 701 703 702 704 811 812 431 426 580 813 814 VR403 VR404 705 707 706 708 815 816 427 425 424 834 835 559 727 836 560 817 818 819 820 837 926 934 821 822 925 927 930 931 935 928 932 936 929 933 937 842 838 839 582 581 840 841 938 939 881 880 VR805 VR804 844 847 846 848 883 882 843 845 849 850 885 884 857 853 854 887 886 VR806 858 859 VR807 VR808 923 855 856 877 860 801 876 873
C	839 445 444 838 835 836 447 446 837 449 448 401 402 833 450 403 404 832 834 415 405 406 830 831 407 408 442 881 443 441 916 409 411 410 412 440 413 414 439 438 416 428 801 433 437 436 434 531 532 431 435 430 432 535 533 536 534 429 803 804 805 802 427 426 539 549 540 541 542 425 424 543 423 422 546 544 550 807 806 545 548 421 420 547 809 808 819 811 818 810 701 702 418 703 725 704 817 815 816 814 419 813 812 705 706 821 820 417 537 538 823 822 825 824 915 827 826 914 917 919 920 918 926 852 921 843 842 922 840 841 851 850 847 845 846 844 849 848 913
L	805 403 404 401 402 803 804 801 802 903
T	801
SW	S5-1 ST-2 ST-4 S5-2 ST-1 ST-6 ST-7 S502-2 S502-1 ST-8 ST-12 S503-1 S503-2 ST-11 S801-5 S801-1 S801-2 S801-3 S801-4 ST-9 ST-10 S4

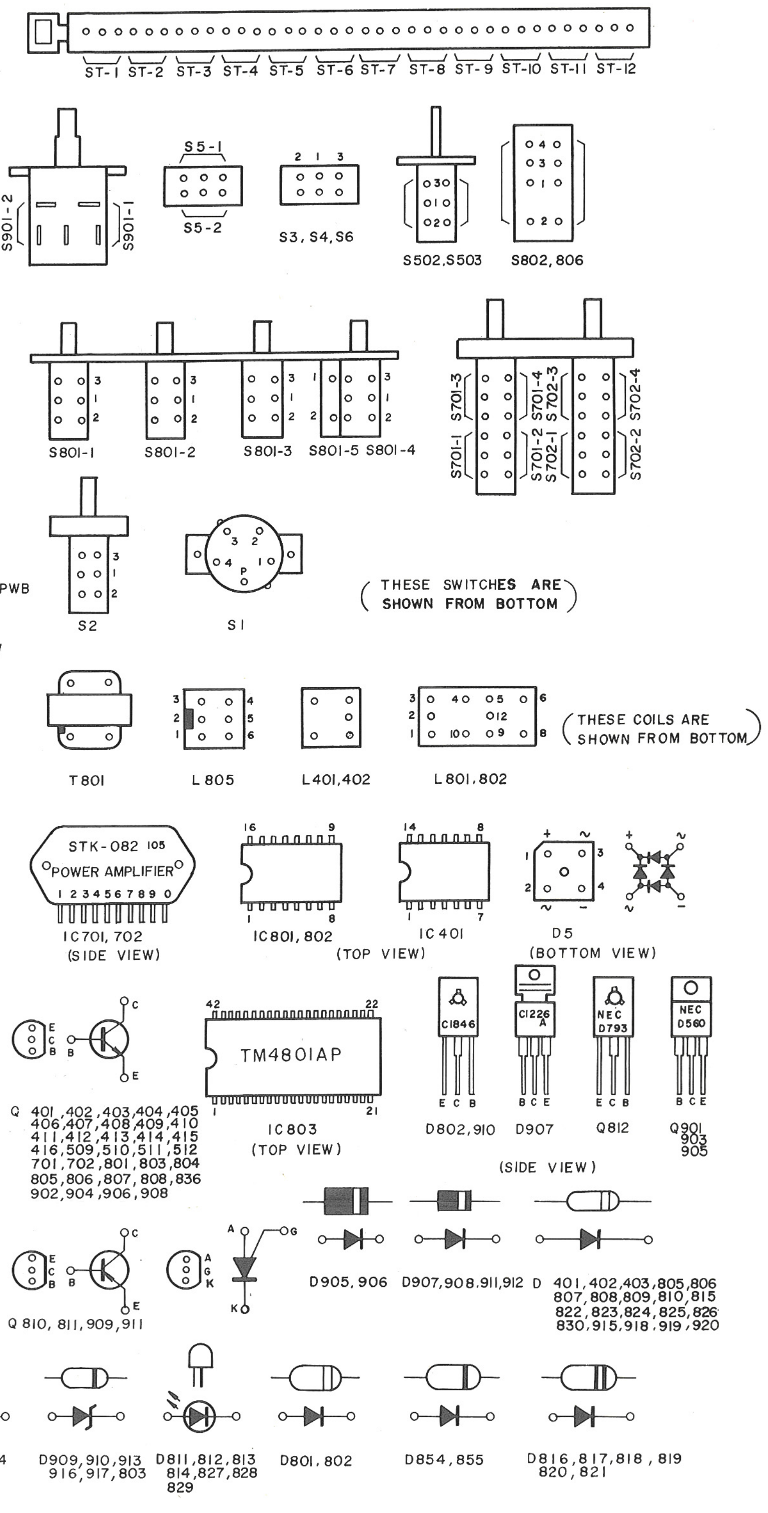
* This diagram might be modified without notice for further development of technology.

DIAGRAM
RCUIT)


LG4030
DP1
IC803
SUP9700A
BRIGHT CONT
Q812
2SD793-Q,P
RECT
D826
MA150
DIGITAL CLOCK
IC803
TM4801AP
TIMER IND
D827
SLP114B-11
50HZ
S6
60HZ
DISPLAY SW
ADJUST SW
TIMER SW
SLEEP SW
E
Play
Rec
To LOGIC PWB [MC21]
TIMER FUNCTION SW
SUP9700B
SUP9700C
FM LINE ANT
MC28
MC29
SUP9600
MC31
OFF / AUTO
ON
S2
SUP9660
For UK
MC30
Muting
SUP9680C
M5
Lch VU
M4
Rch VU
Dial Lamp
2.5V 0.15A
PL-1 PL-2
PWB
Muting
Tape CT
Motor CT
PL-3
Rec Meter Lamp 14V50mA
PL-4
Tape Out
Muting
Meter Lamp 14V 50mA (Signal, Tuning, Dial)
PL-5 PL-6
IC701
IC702
MC19
F701 4AT
F702 4AT
Left Speaker
Right Speaker
S3-1
S3-2
SUP9480
SUP9760
D5

PPEEK IND	MUTING	POWER AMP	STABILIZER	STABILIZER	RECT	DAMPER
D828	Q807, 808	IC701,702	Q901,903,905	D909	D907,908,911	D912
SLP614B-11	2SC945L-P,K	STK082-105	2SD560FV-K,L,M	MA1200LF	10E1LF	10E1LF
D829	SWITCHING	SWITCHING	Q902,904,906	D910	D5	D823
SLP114B-11	D822,824,825,830	Q811	2SC945L-P,K	MA1160LF	S10VB20T	MA150
	MA150	2SA683-R,S	Q907	D913	D905,906	
		Q809	2SC1226A-Q,R	MA1130LF	S2V20F	
		N13T1				
		Q810				
		2SA564-R,S				




ST-1 ST-2 ST-3 ST-4 ST-5 ST-6 ST-7 ST-8 ST-9 ST-10 ST-11 ST-12
S901-2
S901-1
S5-1
S5-2
S3, S4, S6
S502,S503
S802, 806
S801-1
S801-2
S801-3
S801-5 S801-4
S701-1
S701-3
S701-2
S702-1
S701-4
S702-3
S702-2
S702-4
S2
S1
THESE SWITCHES ARE SHOWN FROM BOTTOM
T801
L805
L401,402
L801,802
THESE COILS ARE SHOWN FROM BOTTOM
STK-082 105
POWER AMPLIFIER
IC701, 702 (SIDE VIEW)
IC801, 802
IC401
(TOP VIEW)
D5 (BOTTOM VIEW)
TM4801AP
IC803 (TOP VIEW)
Q 401,402,403,404,405 406,407,408,409,410 411,412,413,414,415 416,509,510,511,512 701,702,801,803,804 805,806,807,808,836 902,904,906,908
D802,910
D907
Q812
Q901 903 905
(SIDE VIEW)
Q 810, 811, 909, 911
D905,906
D907,908,911,912
D 401,402,403,805,806 807,808,809,810,815 822,823,824,825,826 830,915,918,919,920
D804, 914
D909,910,913 916,917,803
D811,812,813 814,827,828 829
D801, 802
D854, 855
D816,817,818,819 820,821

NOTES

(1)
S1 : POWER VOLTAGE SELECTOR SWITCH IN "220V" POSITION
(P:COMMON, 1:110V, 2:120V, 3:220V, 4:240)
S2 : OPERATION SWITCH IN "ON" POSITION
S3 : SPEAKER CONNECTION SELECTOR SWITCH IN "A+B" POSITION
S4 : CLOCK LIGHT SELECTOR SWITCH IN "BRIGHT" POSITION
S6 : 50Hz/60Hz SELECTOR SWITCH IN "50Hz" POSITION
ST1~ST12 : REC/PLAY SELECTOR SWITCH IN "PLAY" POSITION
S502 : LOUDNESS SWITCH IN "OFF" POSITION
S503 : HIGH CUT FILTER SWITCH IN "OFF" POSITION
S701 : SPEAKER (A) SWITCH IN "OFF" POSITION
S702 : SPEAKER (B) SWITCH IN "OFF" POSITION
S801-1~801-3 : TAPE SELECTOR SWITCH IN "NORMAL" POSITION
(801-1 : CrO_2, 801-2: FeCr 801-3: Normal)
S801-4 : DOLBY SWITCH IN "OUT" POSITION
S801-5 : TAPE MUTING SWITCH IN "OFF" POSITION
(LINKAGE WITH S801-1~801-3)
S802 : DISPLAY SELECTOR SWITCH IN "CLOCK" POSITION
S803 : ADJUST SWITCH IN "OFF" POSITION
S804 : TIMER CONTROL SWITCH IN "OFF" POSITION
S805 : SLEEP SWITCH IN "OFF" POSITION
S806 : TIMER FUNCTION SWITCH IN "FM" POSITION
S901 : POWER SWITCH IN "ALL OFF" POSITION

(2) Letters Z, M, K, J & F indicate tolerance of capacitors as follows

$Z = {}^{+80}_{-20}\%$ M = ±20% K = ±10% J = ±5% F = ±1 %

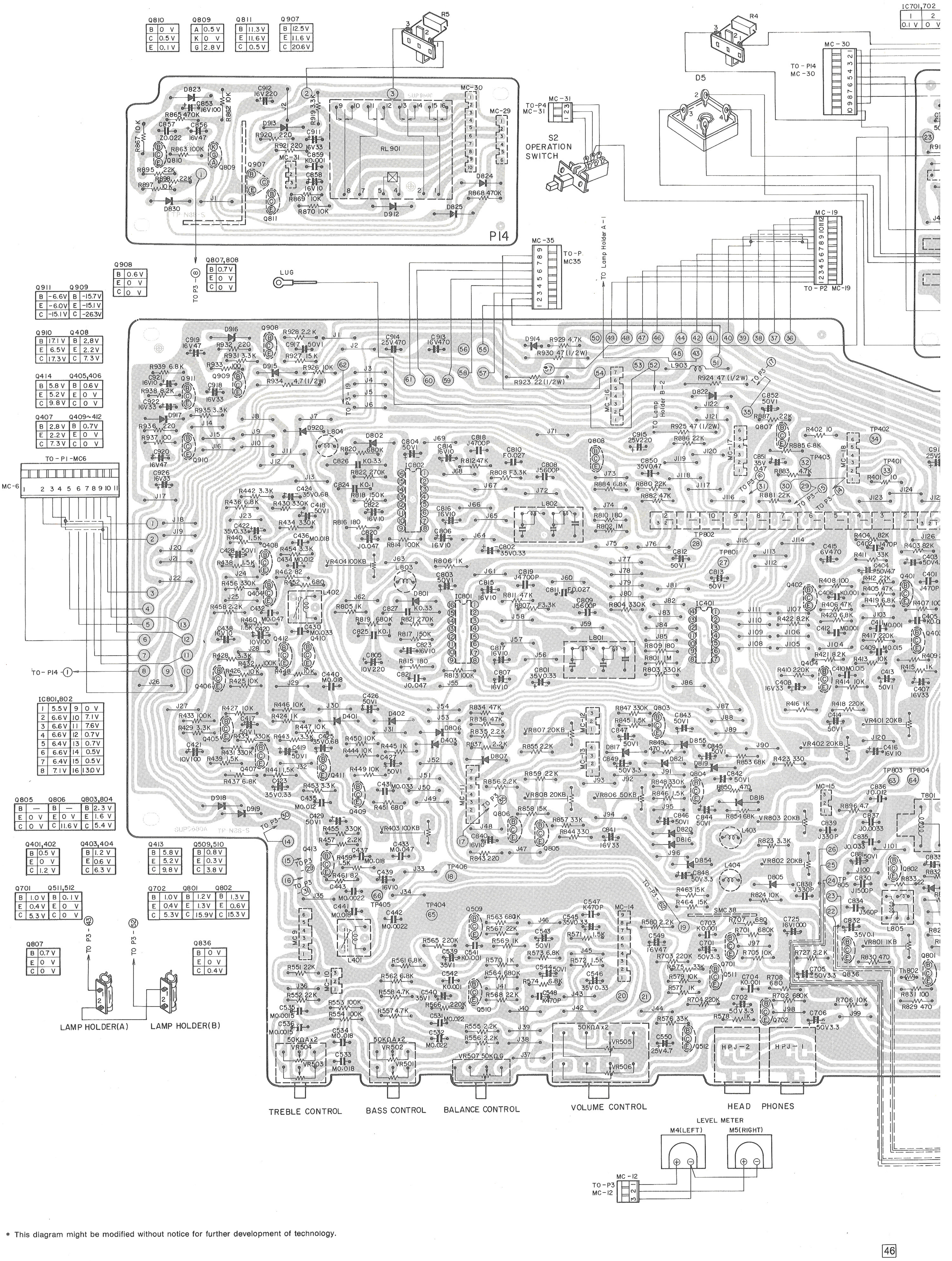
(3) DC Voltages shown in ▭, ⬭, ⬡, or ( ) are to be measured with VTVM.

(4) THE **S** MARKS IS SAFETY PARTS

SCHEMATIC DIAGRAM OF AF CIRCUITRY

MODEL NO. SG – 6070

WIRING DIAG
(AF CIRCU



Q810
Q809
Q811
Q907
R5
R4
D5
S2 OPERATION SWITCH
TO-P4 MC-31
TO-P14 MC-30
MC-30
MC-29
MC-31
RL901
P14
MC-35
TO-P MC35
TO Lamp Holder A-1
MC-19
TO-P2 MC-19
LUG
Q908
Q807,808
Q911
Q909
Q910
Q408
Q414
Q405,406
Q407
Q409~412
TO-P1-MC6
MC-6
TO-P14-①
IC801,802
Q805
Q806
Q803,804
Q401,402
Q403,404
Q413
Q509,510
Q701
Q511,512
Q702
Q801
Q802
Q807
Q836
TO P3-43
TO P3-42
LAMP HOLDER(A)
LAMP HOLDER(B)
IC802
IC801
IC401
L802
L801
L803
L402
L401
L403
L404
MC-16
MC-17
MC-18
MC-12
MC-13
MC-11
MC-14
MC-15
MC-9
MC-10
SMC38
VR504
VR503
VR502
VR501
VR507 50KΩG
VR505
VR506
50KΩAx2
HPJ-2
HPJ-1
TREBLE CONTROL
BASS CONTROL
BALANCE CONTROL
VOLUME CONTROL
HEAD PHONES
LEVEL METER
M4(LEFT)
M5(RIGHT)
TO-P3 MC-12
MC-12
IC701,702
T801

* This diagram might be modified without notice for further development of technology.

IAGRAM
RCUIT)

IC701,702

1	2	3	4	5	6	7	8	9	10
0.1 V	0 V	0.1 V	-26.8V	-1.4 V	-29.4V	0 V	28.1 V	1.2 V	25.5V

Q906

B	19.6 V
E	19.0 V
C	26.4 V

Q904

B	15.9 V
E	15.4 V
C	27.0 V

Q901

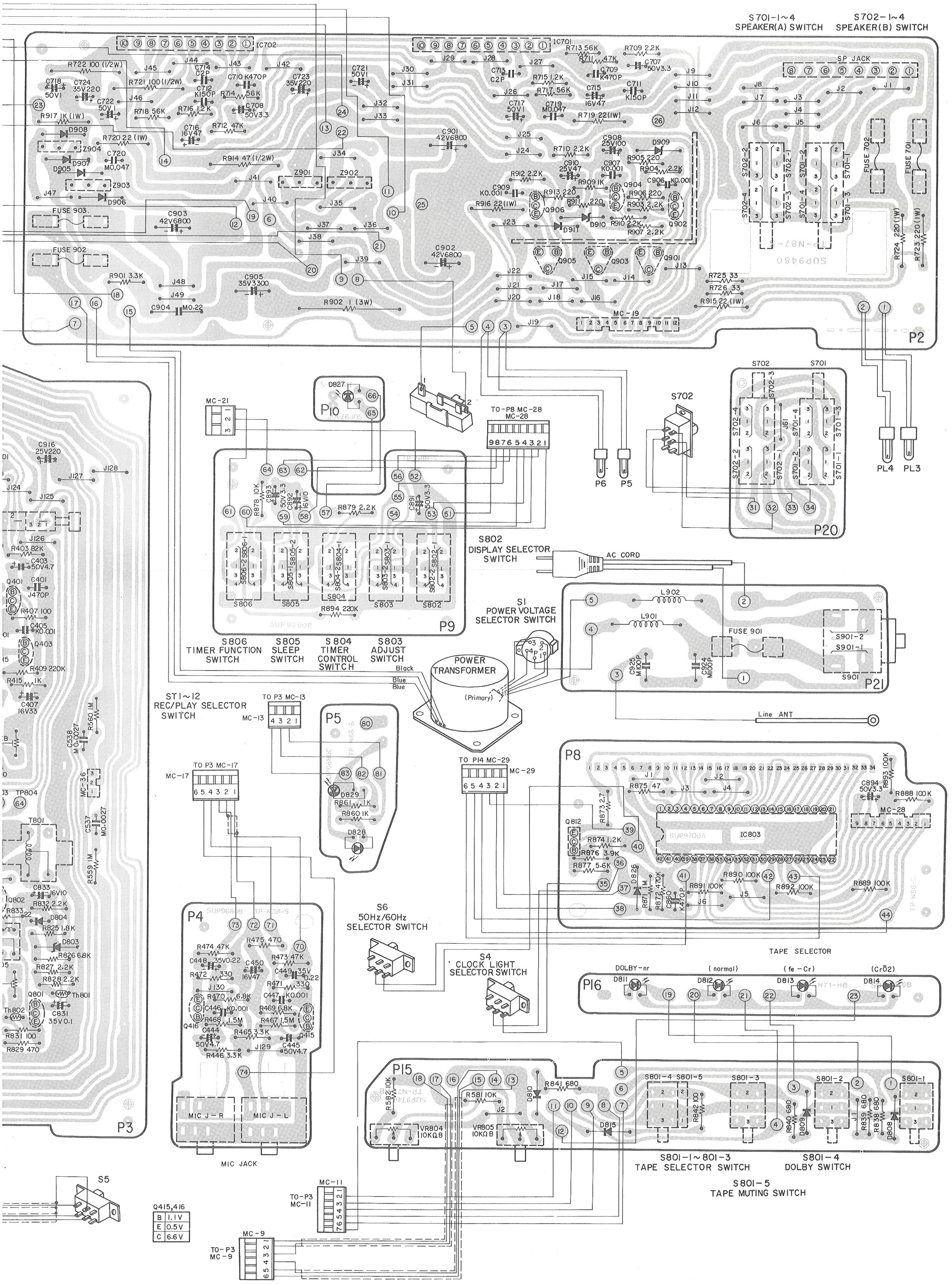
B	19.0 V
E	18.0 V
C	26.5 V

Q903

B	15.4 V
E	14.2 V
C	27.4 V

Q905

B	15.4 V
E	14.2 V
C	26.5 V


S701-1~4
SPEAKER(A) SWITCH
S702-1~4
SPEAKER(B) SWITCH
IC702
IC701
SP JACK
FUSE 903
FUSE 902
FUSE 702
FUSE 701
P2
MC-19
MC-21
P10
D827
TO-P8 MC-28
MC-28
S702
P6
P5
PL4
PL3
P20
P9
S802
DISPLAY SELECTOR
SWITCH
AC CORD
S806
TIMER FUNCTION
SWITCH
S805
SLEEP
SWITCH
S804
TIMER
CONTROL
SWITCH
S803
ADJUST
SWITCH
S1
POWER VOLTAGE
SELECTOR SWITCH
POWER
TRANSFORMER
(Primary)
Black
Blue
Blue
L902
L901
FUSE 901
S901-2
S901-1
S901
P21
Line ANT
ST1~12
REC/PLAY SELECTOR
SWITCH
TO P3 MC-13
MC-13
P5
D829
D828
TO P14 MC-29
MC-29
P8
IC803
Q812
TO P3 MC-17
MC-17
P4
Q416
Q415
MIC J-R
MIC J-L
MIC JACK
P3
S6
50Hz/60Hz
SELECTOR SWITCH
S4
CLOCK LIGHT
SELECTOR SWITCH
TAPE SELECTOR
DOLBY-nr
(normal)
(fe-Cr)
(CrO2)
P16
P15
VR804
10KΩB
VR805
10KΩB
S801-4
S801-5
S801-3
S801-2
S801-1
S801-1~801-3
TAPE SELECTOR SWITCH
S801-4
DOLBY SWITCH
S801-5
TAPE MUTING SWITCH
S5
TO-P3
MC-11
MC-9
TO-P3
MC-9

Q415,416

B	1.1V
E	0.5V
C	6.6V

SCHEMATIC DIA
(TAPE DECK CONTR

TOUCH SENSOR
Q8101, 8103, 8105, 8107
8109, 8111, 8113
2SA733A-QIY

TOUCH SENSOR
Q8102, 8104, 8106, 8108
8110, 8112, 8114
2SA564-R, S

SURGE PROTECTER
D8101, 8103, 8105, 8107
8109, 8111, 8113
MA150

RECT
D8102, 8104, 8106, 8108
8110, 8112, 8114
MA150

OPERATIONAL CONT
IC8101
AN6251

SWITCHING
D8131 ~ 8164
MA150

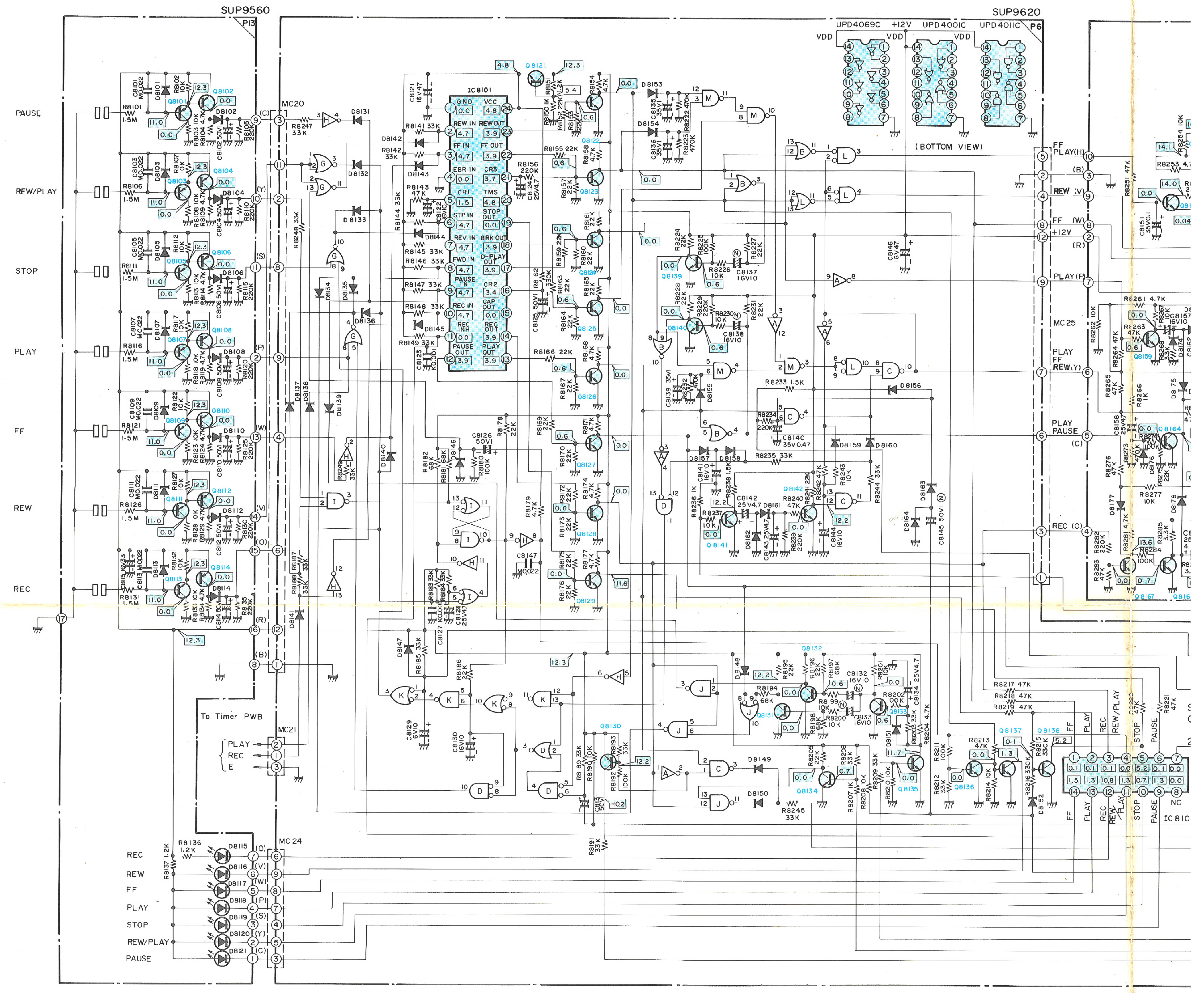
STABILIZER
Q8121
2SC1317-R, S

SWITCHING
Q8122 ~ 8129
8134, 8139, 8140
2SC945L-P, K

SYNCHRO START
Q8131, 8132
8133, 8135
2SC945L-P, K

REW IND MUTING
Q8136
2SC945L-P, K

RE
Q8
2S


SUP9560
P13
SUP9620
P6
UPD4069C
+12V
UPD4001C
UPD4011C
VDD
(BOTTOM VIEW)
PAUSE
REW/PLAY
STOP
PLAY
FF
REW
REC
MC20
MC21
MC24
MC25
IC8101
GND
VCC
REW IN
REW OUT
FF IN
FF OUT
EBR IN
CR3
CR1
TMS
STP IN
STOP OUT
REV IN
BRK OUT
FWD IN
D-PLAY OUT
PAUSE IN
CR2
REC IN
CAP OUT
REC INH
REC OUT
PAUSE OUT
PLAY OUT
To Timer PWB
PLAY
REC
E
FF PLAY(H)
REW (V)
FF (W)
+12V
PLAY(P)
PLAY FF REW(Y)
PLAY PAUSE
REC (O)
FF
PLAY
REC
REW/PLAY
STOP
PAUSE
NC
IC810

DECK OPERATION IND
D8115 SLP114B-11
D8116 ~ 8121 SLP214B-11

REC HOLD
Q8130
2SA564-R,S

END SENSOR
Q8141, 8142
2SC945L-P, K

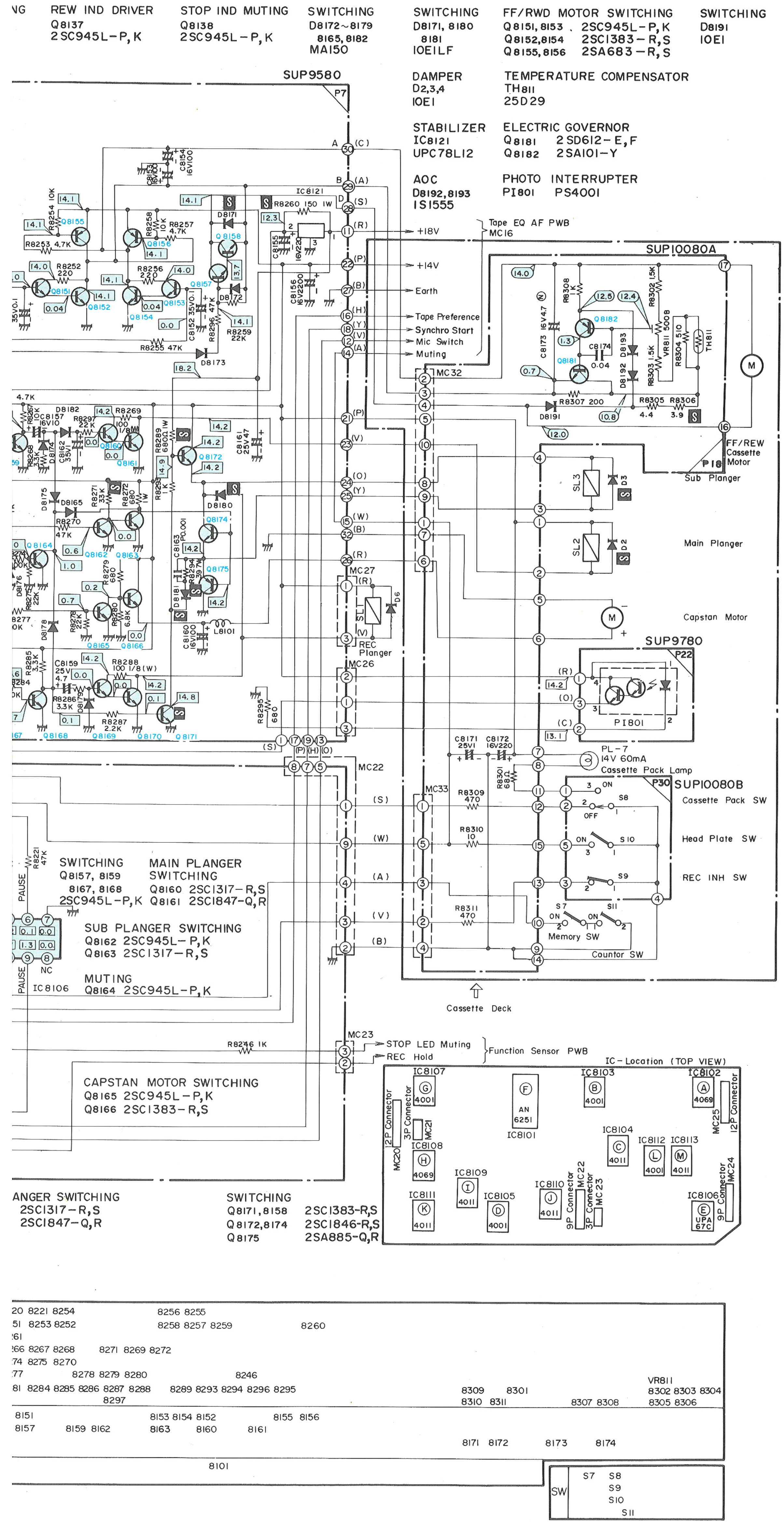
DECK OPERATION IND DRIVER
IC8106
UPA67C

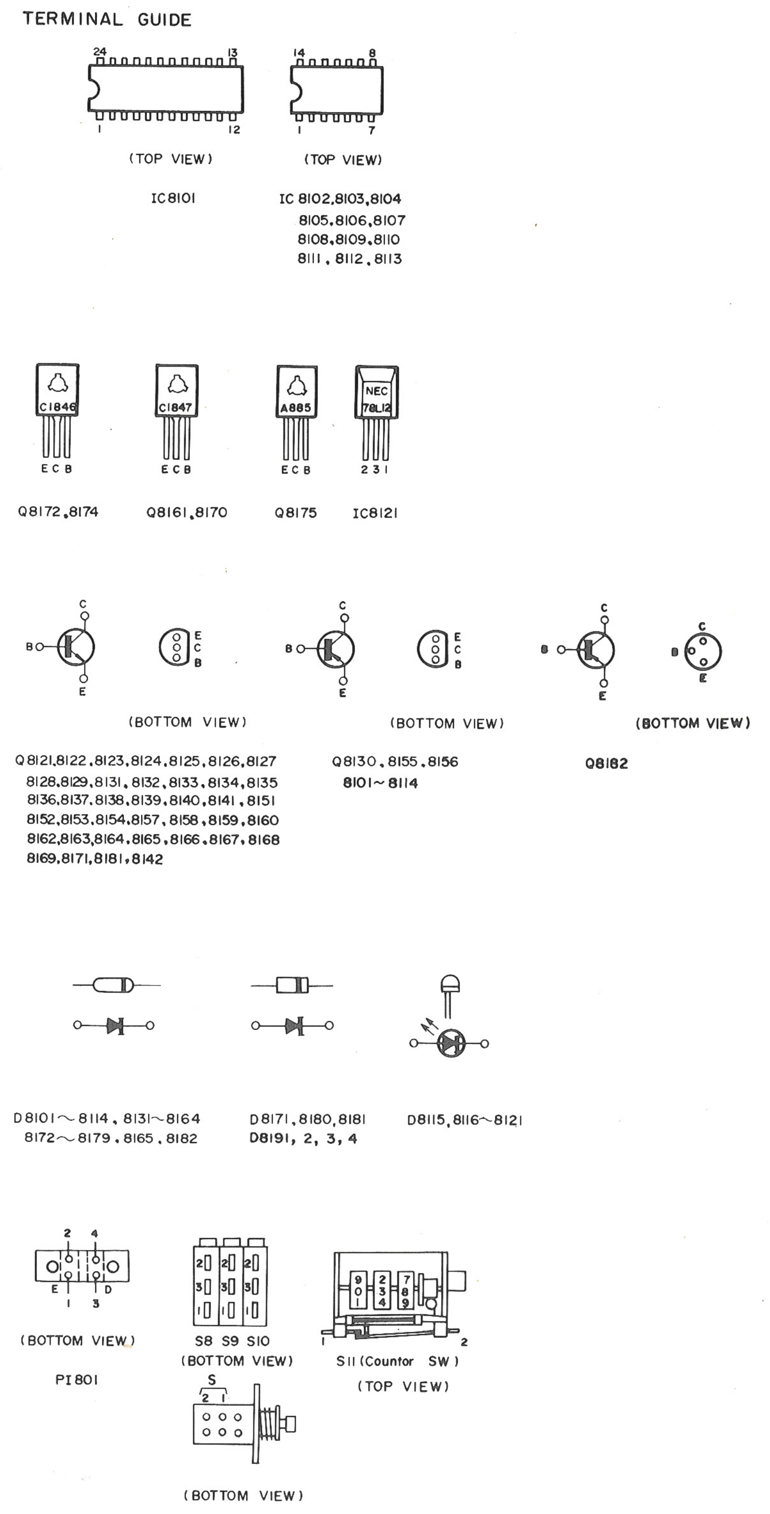
REC PLANGER S
Q8169 2SC1317
Q8170 2SC184

R	8101 8102 8103 8104 8105 8141 8142 8180 8178 8179 8150 8151 8152 8153 8154 8222 8223 8194 8195 8196 8197 8199 8201 8202 8203 8204 8220 8221 82 8106 8107 8108 8109 8110 8143 8144 8156 8155 8157 8158 8224 8225 8226 8227 8198 8200 8207 8210 8251 8253 82 8111 8112 8113 8114 8115 8145 8146 8159 8160 8161 8228 8229 8230 8231 8205 8206 8208 8209 8211 8212 8213 8214 8215 8216 8262 8263 8261 8116 8117 8118 8119 8120 8147 8148 8162 8163 8164 8165 8232 8234 8233 8242 8243 8244 8217 8218 8219 8265 8264 8266 8267 82 8121 8122 8123 8124 8125 8247 8248 8249 8149 8166 8167 8168 8236 8237 8238 8235 8239 8240 8241 8273 8274 8275 82 8126 8127 8128 8129 8130 8182 8181 8169 8170 8171 8189 8191 8245 8276 8277 8131 8132 8133 8134 8135 8183 8184 8172 8173 8174 8190 8192 8282 8283 8281 8284 82 8137 8136 8187 8188 8185 8186 8175 8176 8177 8193
C	8101 8103 8102 8104 8121 8122 8151 8105 8107 8106 8108 8123 8126 8124 8125 8131 8135 8136 8137 8138 8140 8132 8133 8134 8158 8157 8109 8111 8110 8112 8129 8127 8128 8130 8147 8139 8141 8142 8143 8144 8146 8145 8115 8113 8114
L	

* This diagram might be modified without notice for further development of technology.

DIAGRAM
ITROL CIRCUIT)


REW IND DRIVER
Q8137
2SC945L−P,K
STOP IND MUTING
Q8138
2SC945L−P,K
SWITCHING
D8172∼8179
8165, 8182
MA150
SWITCHING
D8171, 8180
8181
10E1LF
FF/RWD MOTOR SWITCHING
Q8151, 8153 2SC945L−P,K
Q8152, 8154 2SC1383−R,S
Q8155, 8156 2SA683−R,S
SWITCHING
D8191
10E1
DAMPER
D2,3,4
10E1
TEMPERATURE COMPENSATOR
TH811
25D29
STABILIZER
IC8121
UPC78L12
ELECTRIC GOVERNOR
Q8181 2SD612−E,F
Q8182 2SA101−Y
AOC
D8192, 8193
1S1555
PHOTO INTERRUPTER
PI801 PS4001
SUP9580
P7
SUP10080A
Tape EQ AF PWB
MC16
+18V
+14V
Earth
Tape Preference
Synchro Start
Mic Switch
Muting
MC32
M
FF/REW Cassette Motor
P18
Sub Planger
SL3
SL2
D3
D2
Main Planger
Capstan Motor
MC27
SL1
D6
REC Planger
MC26
SUP9780
P22
PI801
PL−7
14V 60mA
Cassette Pack Lamp
P30
SUP10080B
Cassette Pack SW
S8
Head Plate SW
S10
REC INH SW
S9
S7
S11
Memory SW
Countor SW
MC22
MC33
Cassette Deck
MC23
STOP LED Muting
REC Hold
Function Sensor PWB
IC−Location (TOP VIEW)
IC8107 G 4001
IC8101 F AN6251
IC8103 B 4001
IC8102 A 4069
IC8108 H 4069
IC8104 C 4011
IC8112 L 4001
IC8113 M 4011
IC8109 I 4011
IC8111 K 4011
IC8105 D 4001
IC8110 J 4011
IC8106 E UPA67C
12P Connector
3P Connector
MC21
MC20
9P Connector
MC22
3P Connector
MC23
MC25
12P Connector
9P Connector
MC24
SWITCHING
Q8157, 8159
8167, 8168
2SC945L−P,K
MAIN PLANGER SWITCHING
Q8160 2SC1317−R,S
Q8161 2SC1847−Q,R
SUB PLANGER SWITCHING
Q8162 2SC945L−P,K
Q8163 2SC1317−R,S
MUTING
Q8164 2SC945L−P,K
IC8106
PAUSE
CAPSTAN MOTOR SWITCHING
Q8165 2SC945L−P,K
Q8166 2SC1383−R,S
ANGER SWITCHING
2SC1317−R,S
2SC1847−Q,R
SWITCHING
Q8171, 8158 2SC1383−R,S
Q8172, 8174 2SC1846−R,S
Q8175 2SA885−Q,R
IC8121
R8260 150 1W
R8246 1K
R8295 680
R8309 470
R8310 10
R8311 470
C8171 25V1
C8172 16V220
R8307 200
R8305 4.4
R8306 3.9
R8303 1.5K
R8302 1.5K
VR811 500B
R8304 510
TH811
C8174 0.04
C8173 16V4.7
Q8181
Q8182
D8191
D8192
D8193
L8101
20 8221 8254
51 8253 8252
61
66 8267 8268
74 8275 8270
77
81 8284 8285 8286 8287 8288
8256 8255
8258 8257 8259
8260
8271 8269 8272
8278 8279 8280
8246
8289 8293 8294 8296 8295
8297
8309 8301
8310 8311
8307 8308
VR811
8302 8303 8304
8305 8306
8151
8157
8153 8154 8152
8163 8160
8159 8162
8161
8155 8156
8171 8172
8173 8174
8101
SW
S7 S8
S9
S10
S11


TERMINAL GUIDE
24 13
1 12
(TOP VIEW)
IC8101
14 8
1 7
(TOP VIEW)
IC 8102, 8103, 8104
8105, 8106, 8107
8108, 8109, 8110
8111, 8112, 8113
C1846
E C B
Q8172, 8174
C1847
E C B
Q8161, 8170
A885
E C B
Q8175
NEC 78L12
2 3 1
IC8121
(BOTTOM VIEW)
Q8121, 8122, 8123, 8124, 8125, 8126, 8127
8128, 8129, 8131, 8132, 8133, 8134, 8135
8136, 8137, 8138, 8139, 8140, 8141, 8151
8152, 8153, 8154, 8157, 8158, 8159, 8160
8162, 8163, 8164, 8165, 8166, 8167, 8168
8169, 8171, 8181, 8142
(BOTTOM VIEW)
Q8130, 8155, 8156
8101∼8114
(BOTTOM VIEW)
Q8182
D8101∼8114, 8131∼8164
8172∼8179, 8165, 8182
D8171, 8180, 8181
D8191, 2, 3, 4
D8115, 8116∼8121
(BOTTOM VIEW)
PI801
S8 S9 S10
(BOTTOM VIEW)
S11 (Countor SW)
(TOP VIEW)
S
(BOTTOM VIEW)

NOTES

(1) S7 : MEMORY SW IN "OFF" POSITION.
S8 : CASSETTE PACK SW IN "OFF" POSITION.
S9 : REC INHIBIT SW IN "ON" POSITION.
S10 : HEAD PLATE SW IN "OFF" POSITION.
S11 : TAPE COUNTOR SW IN "OFF" POSITION.

(2) Letters Z,M,K,J & F indicate tolerance of capacitors as follows.

$Z = {}^{+80\%}_{-20\%}$ $M = \pm 20\%$ $K = \pm 10\%$ $J = \pm 5\%$ $F = \pm 1\%$

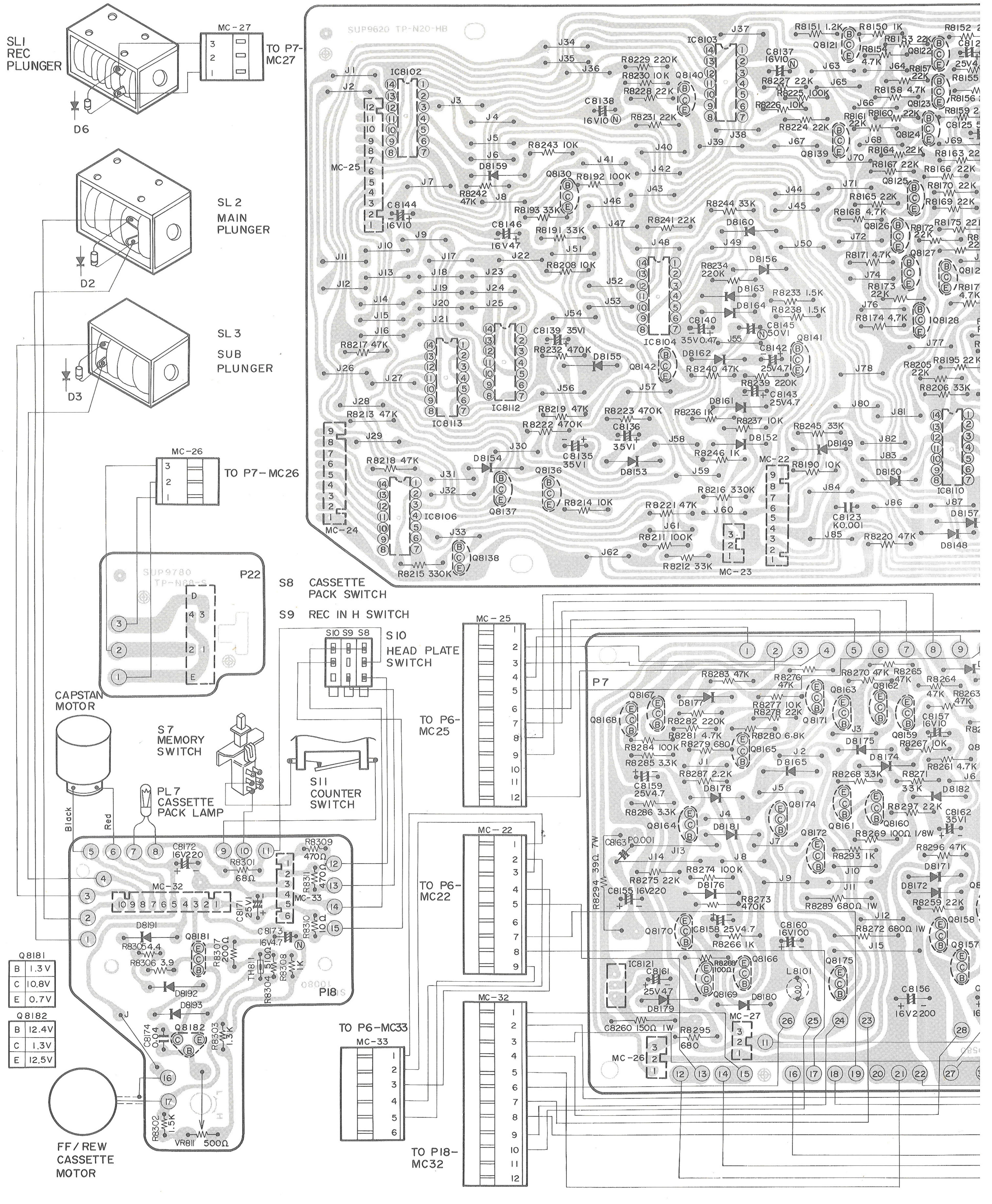
(3) DC Voltages shown in ▭ or ⬭ are to be measured with VTVM.

▭ : "STOP" position. ⬭ : "PLAY" position.

(4) THE **S** MARKS IS SAFETY PARTS

SCHEMATIC DIAGRAM
OF
CASSETTE DECK CONTROL CIRCUITRY
MODEL NO. SG−6070

WIRING DIAG
(TAPE DECK CONTRO

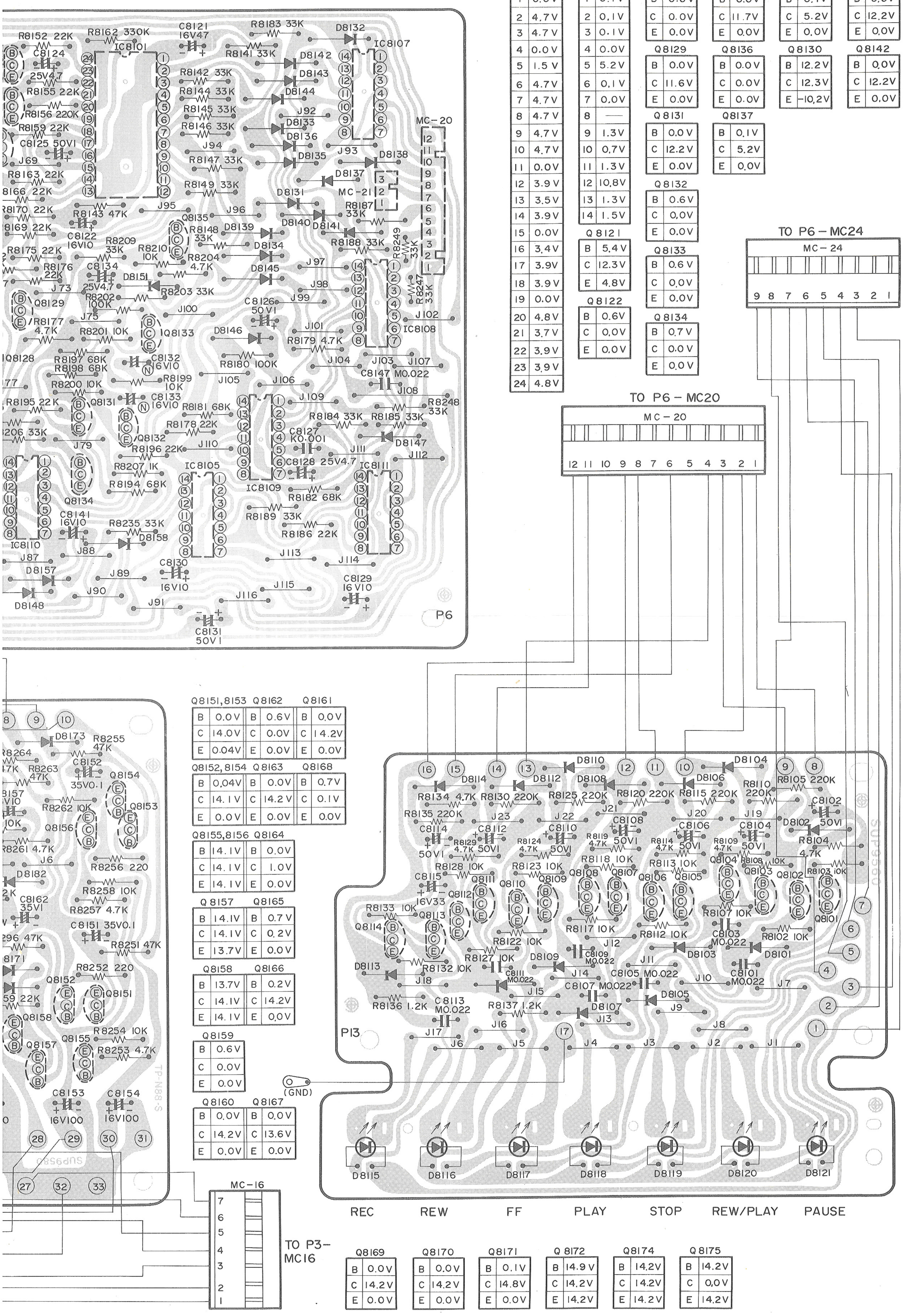

SL1 REC PLUNGER
D6
MC-27
TO P7-MC27
SL 2 MAIN PLUNGER
D2
SL 3 SUB PLUNGER
D3
MC-26
TO P7-MC26
SUP9780 TP-N20-S
P22
S8 CASSETTE PACK SWITCH
S9 REC IN H SWITCH
S10 S9 S8
S10 HEAD PLATE SWITCH
CAPSTAN MOTOR
S7 MEMORY SWITCH
S11 COUNTER SWITCH
PL7 CASSETTE PACK LAMP
Black
Red
MC-32
MC-33
P18
VR811 500Ω
FF/REW CASSETTE MOTOR
SUP9620 TP-N20-HB
IC8102
IC8103
IC8104
IC8106
IC8110
IC8112
IC8113
IC8121
MC-22
MC-23
MC-24
MC-25
MC-26
MC-27
P7
TO P6-MC25
TO P6-MC22
TO P6-MC33
TO P18-MC32

Q8181	
B	1.3V
C	10.8V
E	0.7V

Q8182	
B	12.4V
C	1.3V
E	12.5V

* This diagram might be modified without notice for further development of technology.

IAGRAM
ITROL CIRCUIT)


P6
IC8101
IC8107
IC8108
IC8105
IC8109
IC8110
IC8111
MC-20
MC-21
TO P6-MC24
MC-24
TO P6-MC20
MC-20
P13
(GND)
MC-16
TO P3-MC16
D8115
D8116
D8117
D8118
D8119
D8120
D8121
REC
REW
FF
PLAY
STOP
REW/PLAY
PAUSE

IC8101	
1	0.0V
2	4.7V
3	4.7V
4	0.0V
5	1.5V
6	4.7V
7	4.7V
8	4.7V
9	4.7V
10	4.7V
11	0.0V
12	3.9V
13	3.5V
14	3.9V
15	0.0V
16	3.4V
17	3.9V
18	3.9V
19	0.0V
20	4.8V
21	3.7V
22	3.9V
23	3.9V
24	4.8V

IC8106	
1	0.1V
2	0.1V
3	0.1V
4	0.0V
5	5.2V
6	0.1V
7	0.0V
8	—
9	1.3V
10	0.7V
11	1.3V
12	10.8V
13	1.3V
14	1.5V

	Q8121	Q8122
B	5.4V	0.6V
C	12.3V	0.0V
E	4.8V	0.0V

	Q8123~8128	Q8129	Q8131	Q8132	Q8133	Q8134
B	0.6V	0.0V	0.0V	0.6V	0.6V	0.7V
C	0.0V	11.6V	12.2V	0.0V	0.0V	0.0V
E	0.0V	0.0V	0.0V	0.0V	0.0V	0.0V

	Q8135	Q8136	Q8137
B	0.0V	0.0V	0.1V
C	11.7V	0.0V	5.2V
E	0.0V	0.0V	0.0V

	Q8138	Q8130	Q8141	Q8142
B	0.1V	12.2V	0.0V	0.0V
C	5.2V	12.3V	12.2V	12.2V
E	0.0V	-10.2V	0.0V	0.0V

	Q8101,8103 8105,8107 8109,8111 8113	Q8102,8104 8106,8108 8110,8112 8114
B	11.0V	12.3V
C	0.0V	0.0V
E	12.3V	12.3V

	Q8151,8153	Q8162	Q8161
B	0.0V	0.6V	0.0V
C	14.0V	0.0V	14.2V
E	0.04V	0.0V	0.0V

	Q8152,8154	Q8163	Q8168
B	0.04V	0.0V	0.7V
C	14.1V	14.2V	0.1V
E	0.0V	0.0V	0.0V

	Q8155,8156	Q8164
B	14.1V	0.0V
C	14.1V	1.0V
E	14.1V	0.0V

	Q8157	Q8165
B	14.1V	0.7V
C	14.1V	0.2V
E	13.7V	0.0V

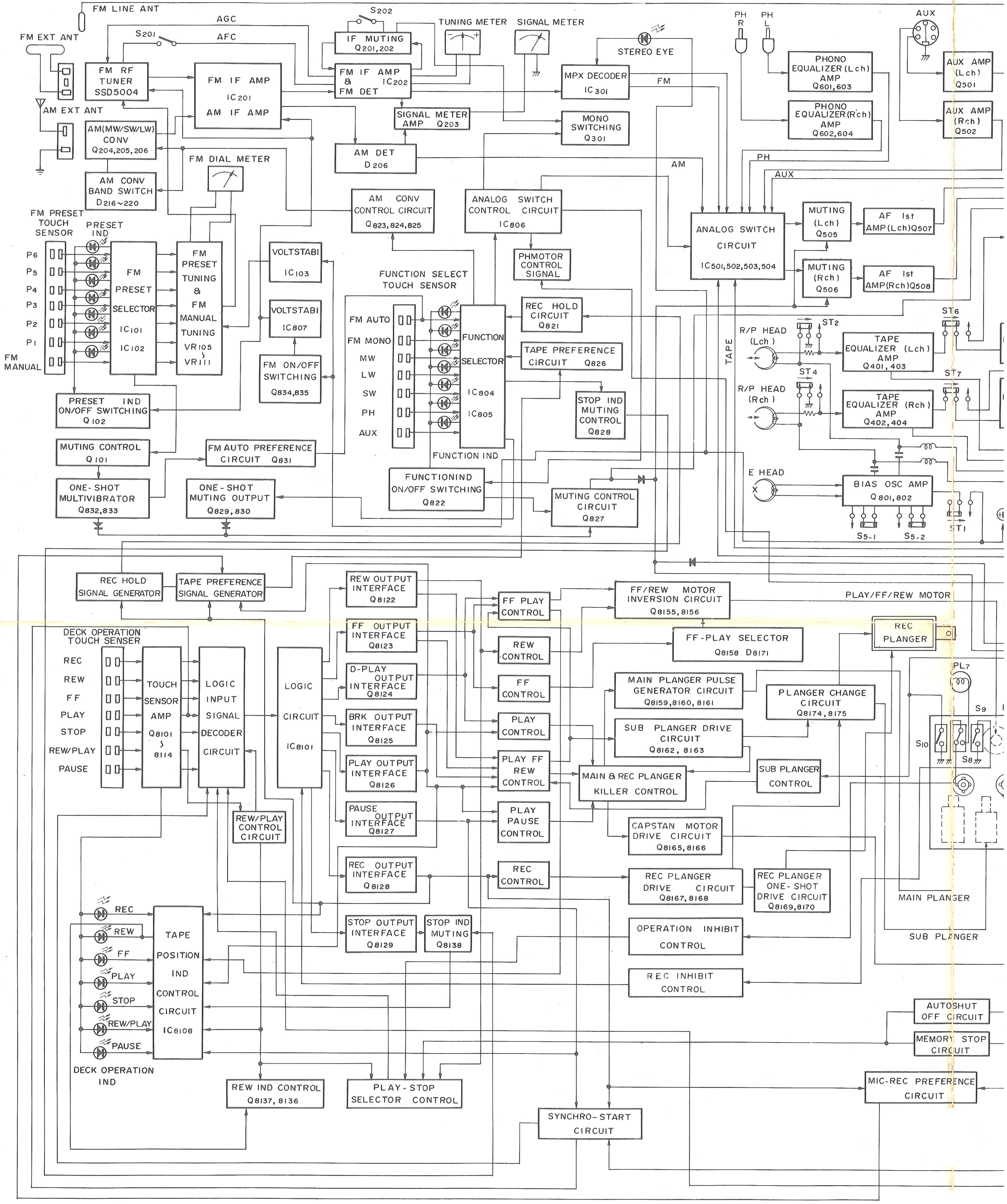
	Q8158	Q8166
B	13.7V	0.2V
C	14.1V	14.2V
E	14.1V	0.0V

	Q8159
B	0.6V
C	0.0V
E	0.0V

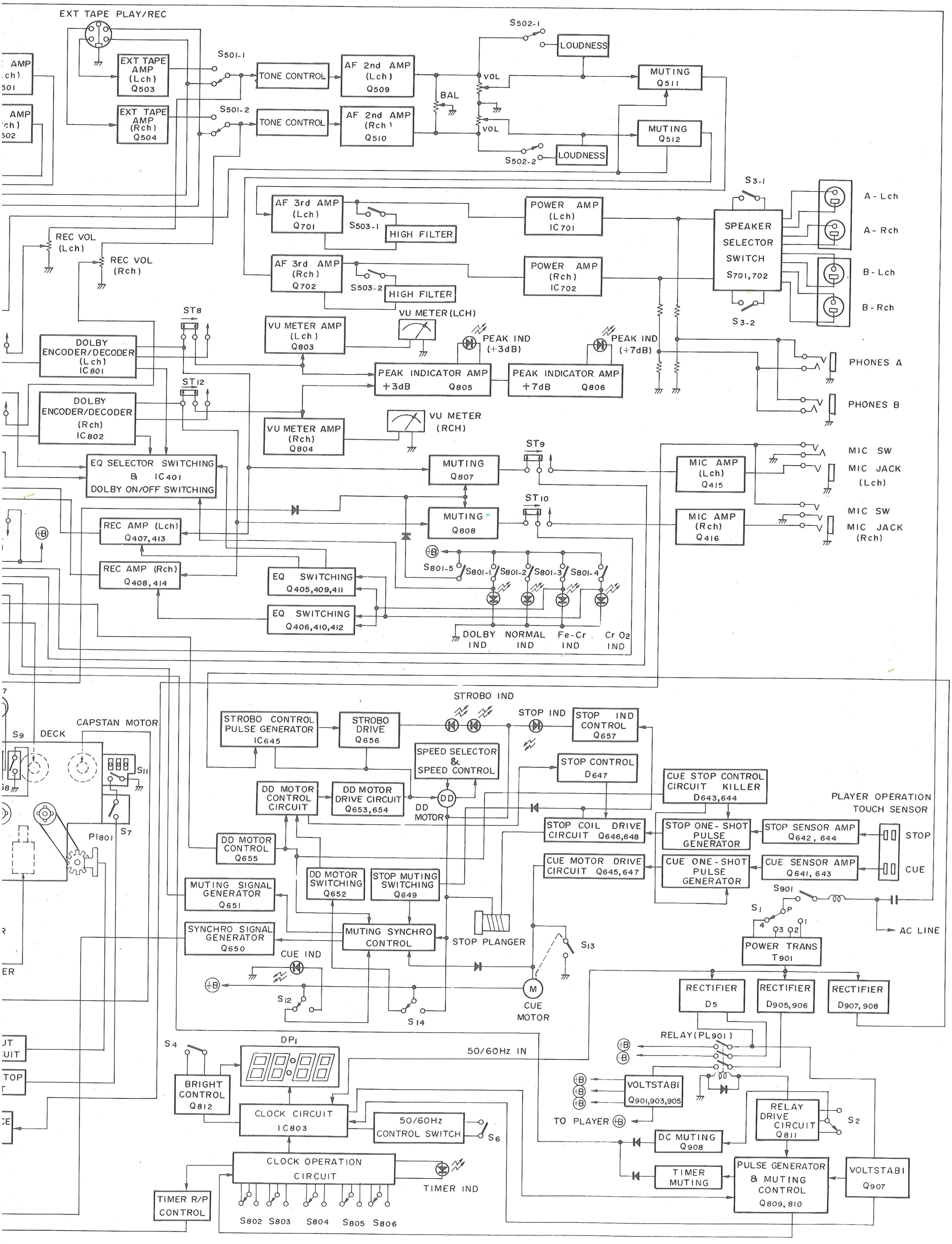
	Q8160	Q8167
B	0.0V	0.0V
C	14.2V	13.6V
E	0.0V	0.0V

	Q8169	Q8170	Q8171	Q8172	Q8174	Q8175
B	0.0V	0.0V	0.1V	14.9V	14.2V	14.2V
C	14.2V	14.2V	14.8V	14.2V	14.2V	0.0V
E	0.0V	0.0V	0.0V	14.2V	14.2V	14.2V

BLOCK DIAGR


FM LINE ANT
FM EXT ANT
AGC
S201
AFC
S202
IF MUTING Q201,202
TUNING METER
SIGNAL METER
STEREO EYE
PH R
PH L
AUX
FM RF TUNER SSD5004
FM IF AMP IC201 AM IF AMP
FM IF AMP & IC202 FM DET
MPX DECODER IC301
FM
PHONO EQUALIZER (Lch) AMP Q601,603
AUX AMP (Lch) Q501
AM EXT ANT
AM(MW/SW/LW) CONV Q204,205,206
SIGNAL METER AMP Q203
MONO SWITCHING Q301
PHONO EQUALIZER (Rch) AMP Q602,604
AUX AMP (Rch) Q502
AM DET D206
FM DIAL METER
AM CONV BAND SWITCH D216~220
AM
PH
AUX
AM CONV CONTROL CIRCUIT Q823,824,825
ANALOG SWITCH CONTROL CIRCUIT IC806
ANALOG SWITCH CIRCUIT IC501,502,503,504
MUTING (Lch) Q505
AF 1st AMP (Lch) Q507
MUTING (Rch) Q506
AF 1st AMP (Rch) Q508
FM PRESET TOUCH SENSOR
PRESET IND
P6
P5
P4
P3
P2
P1
FM MANUAL
FM PRESET SELECTOR IC101 IC102
FM PRESET TUNING & FM MANUAL TUNING VR105 ~ VR111
VOLTSTABI IC103
VOLTSTABI IC807
PHMOTOR CONTROL SIGNAL
FUNCTION SELECT TOUCH SENSOR
FM AUTO
FM MONO
MW
LW
SW
PH
AUX
FUNCTION SELECTOR IC804 IC805
REC HOLD CIRCUIT Q821
TAPE PREFERENCE CIRCUIT Q826
STOP IND MUTING CONTROL Q828
FM ON/OFF SWITCHING Q834,835
TAPE
R/P HEAD (Lch)
ST2
TAPE EQUALIZER (Lch) AMP Q401,403
ST6
R/P HEAD (Rch)
ST4
TAPE EQUALIZER (Rch) AMP Q402,404
ST7
PRESET IND ON/OFF SWITCHING Q102
MUTING CONTROL Q101
FM AUTO PREFERENCE CIRCUIT Q831
FUNCTION IND
ONE-SHOT MULTIVIBRATOR Q832,833
ONE-SHOT MUTING OUTPUT Q829,830
FUNCTIONIND ON/OFF SWITCHING Q822
MUTING CONTROL CIRCUIT Q827
E HEAD
BIAS OSC AMP Q801,802
S5-1
S5-2
ST1
REC HOLD SIGNAL GENERATOR
TAPE PREFERENCE SIGNAL GENERATOR
REW OUTPUT INTERFACE Q8122
FF PLAY CONTROL
FF/REW MOTOR INVERSION CIRCUIT Q8155,8156
PLAY/FF/REW MOTOR
FF OUTPUT INTERFACE Q8123
REW CONTROL
FF-PLAY SELECTOR Q8158 D8171
REC PLANGER
DECK OPERATION TOUCH SENSER
REC
REW
FF
PLAY
STOP
REW/PLAY
PAUSE
TOUCH SENSOR AMP Q8101 ~ 8114
LOGIC INPUT SIGNAL DECODER CIRCUIT
LOGIC CIRCUIT IC8101
D-PLAY OUTPUT INTERFACE Q8124
FF CONTROL
MAIN PLANGER PULSE GENERATOR CIRCUIT Q8159,8160,8161
PLANGER CHANGE CIRCUIT Q8174,8175
PL7
S9
BRK OUTPUT INTERFACE Q8125
PLAY CONTROL
SUB PLANGER DRIVE CIRCUIT Q8162,8163
S10
S8
PLAY OUTPUT INTERFACE Q8126
PLAY FF REW CONTROL
MAIN & REC PLANGER KILLER CONTROL
SUB PLANGER CONTROL
REW/PLAY CONTROL CIRCUIT
PAUSE OUTPUT INTERFACE Q8127
PLAY PAUSE CONTROL
CAPSTAN MOTOR DRIVE CIRCUIT Q8165,8166
REC OUTPUT INTERFACE Q8128
REC CONTROL
REC PLANGER DRIVE CIRCUIT Q8167,8168
REC PLANGER ONE-SHOT DRIVE CIRCUIT Q8169,8170
MAIN PLANGER
REC
REW
FF
PLAY
STOP
REW/PLAY
PAUSE
TAPE POSITION IND CONTROL CIRCUIT IC8106
STOP OUTPUT INTERFACE Q8129
STOP IND MUTING Q8138
OPERATION INHIBIT CONTROL
SUB PLANGER
REC INHIBIT CONTROL
AUTOSHUT OFF CIRCUIT
MEMORY STOP CIRCUIT
DECK OPERATION IND
REW IND CONTROL Q8137,8136
PLAY-STOP SELECTOR CONTROL
MIC-REC PREFERENCE CIRCUIT
SYNCHRO-START CIRCUIT

AGRAM


EXT TAPE PLAY/REC
AMP
ch)
501
AMP
ch)
502
EXT TAPE AMP (Lch) Q503
EXT TAPE AMP (Rch) Q504
S501-1
S501-2
TONE CONTROL
TONE CONTROL
AF 2nd AMP (Lch) Q509
AF 2nd AMP (Rch) Q510
BAL
VOL
VOL
S502-1
S502-2
LOUDNESS
LOUDNESS
MUTING Q511
MUTING Q512
S3-1
S3-2
SPEAKER SELECTOR SWITCH S701,702
A-Lch
A-Rch
B-Lch
B-Rch
AF 3rd AMP (Lch) Q701
AF 3rd AMP (Rch) Q702
S503-1
S503-2
HIGH FILTER
HIGH FILTER
POWER AMP (Lch) IC701
POWER AMP (Rch) IC702
REC VOL (Lch)
REC VOL (Rch)
ST8
ST12
DOLBY ENCODER/DECODER (Lch) IC801
DOLBY ENCODER/DECODER (Rch) IC802
VU METER AMP (Lch) Q803
VU METER (LCH)
VU METER AMP (Rch) Q804
VU METER (RCH)
PEAK IND (+3dB)
PEAK IND (+7dB)
PEAK INDICATOR AMP +3dB Q805
PEAK INDICATOR AMP +7dB Q806
PHONES A
PHONES B
EQ SELECTOR SWITCHING & IC401 DOLBY ON/OFF SWITCHING
MUTING Q807
MUTING Q808
ST9
ST10
MIC AMP (Lch) Q415
MIC AMP (Rch) Q416
MIC SW
MIC JACK (Lch)
MIC SW
MIC JACK (Rch)
REC AMP (Lch) Q407,413
REC AMP (Rch) Q408,414
EQ SWITCHING Q405,409,411
EQ SWITCHING Q406,410,412
S801-5
S801-1
S801-2
S801-3
S801-4
DOLBY IND
NORMAL IND
Fe-Cr IND
Cr O2 IND
STROBO IND
STOP IND
STROBO CONTROL PULSE GENERATOR IC645
STROBO DRIVE Q656
STOP IND CONTROL Q657
SPEED SELECTOR & SPEED CONTROL
STOP CONTROL D647
CUE STOP CONTROL CIRCUIT KILLER D643,644
PLAYER OPERATION TOUCH SENSOR
S9
DECK
CAPSTAN MOTOR
S11
S8
S7
PI801
DD MOTOR CONTROL CIRCUIT
DD MOTOR DRIVE CIRCUIT Q653,654
DD
DD MOTOR
STOP COIL DRIVE CIRCUIT Q646,648
STOP ONE-SHOT PULSE GENERATOR
STOP SENSOR AMP Q642, 644
STOP
DD MOTOR CONTROL Q655
CUE MOTOR DRIVE CIRCUIT Q645,647
CUE ONE-SHOT PULSE GENERATOR
CUE SENSOR AMP Q641, 643
CUE
MUTING SIGNAL GENERATOR Q651
DD MOTOR SWITCHING Q652
STOP MUTING SWITCHING Q649
S901
S1
P
1
2
3
4
AC LINE
SYNCHRO SIGNAL GENERATOR Q650
MUTING SYNCHRO CONTROL
STOP PLANGER
S13
POWER TRANS T901
CUE IND
+B
S12
S14
M
CUE MOTOR
RECTIFIER D5
RECTIFIER D905,906
RECTIFIER D907, 908
R
ER
UT
UIT
TOP
T
CE
S4
DP1
50/60Hz IN
RELAY (PL901)
+B
+B
BRIGHT CONTROL Q812
+B
+B
+B
VOLTSTABI Q901,903,905
TO PLAYER +B
RELAY DRIVE CIRCUIT Q811
S2
CLOCK CIRCUIT IC803
50/60Hz CONTROL SWITCH
S6
DC MUTING Q908
CLOCK OPERATION CIRCUIT
TIMER IND
TIMER MUTING
PULSE GENERATOR & MUTING CONTROL Q809, 810
VOLTSTABI Q907
TIMER R/P CONTROL
S802
S803
S804
S805
S806